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Ideas of Childhood and Digital Technology in the Information Age

By

Keri Lee Facer

**A dissertation submitted to the University of Bristol in accordance with the
requirements of the degree of**

DOCTOR OF PHILOSOPHY

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Abstract

The thesis begins by arguing that the mid 1990s witnessed a proliferation of popular, political and academic discourses of childhood and technology, which characterised children as 'digital natives' and which presented children's seemingly natural facility with digital technology use as heralding the potential for new relationships between children and adults. In order to understand the implications of these representations, the thesis:

1. Conducts a review of the literature of childhood studies, and of childhood in the context of new formations characterised as the 'information society';
2. Examines the relationship between language and society, exploring specifically the concepts of 'hegemony, articulation, recontextualisation, and appropriation/colonisation' drawn from Gramsci, Laclau and Mouffe, Bernstein and Hall's analyses of the role of discourse in political and social change; and
3. Develops a methodology based upon Critical Discourse Analysis, in order to provide an account of the relationship between discursive representations of childhood and the social practices and institutions in which these representations are enacted or resisted.

The data analysed in the thesis comprise:

1. New Labour political speeches between 1996 and 2001, focusing specifically upon Tony Blair's speeches and upon the chain of texts linking Blair's 1996 conference speech, the Stevenson Report and the National Grid for Learning
2. 997 newspaper articles from the years 1997 and 2001, analysed through both a corpus analysis and detailed textual analysis of selected articles
3. 5 Interviews with 6 families in the home conducted between 1998 and 2000

On the basis of this analysis, the thesis contends that, while children were represented as having significant agency and 'natural affinity' with digital technologies in this period (representations which did challenge traditional adult-child relations of the 'dominant framework') this new form of agency was colonised within wider educational policy to act as a warrant for a 'personalisation' of educational provision and a de-articulation of childhood from the institutions of home and school. This process of colonisation serves to obscure the differences in resources available to different children in achieving agency in the context of the 'information age', and serves to create equivalences between different social groupings acting with very different political and social agendas.

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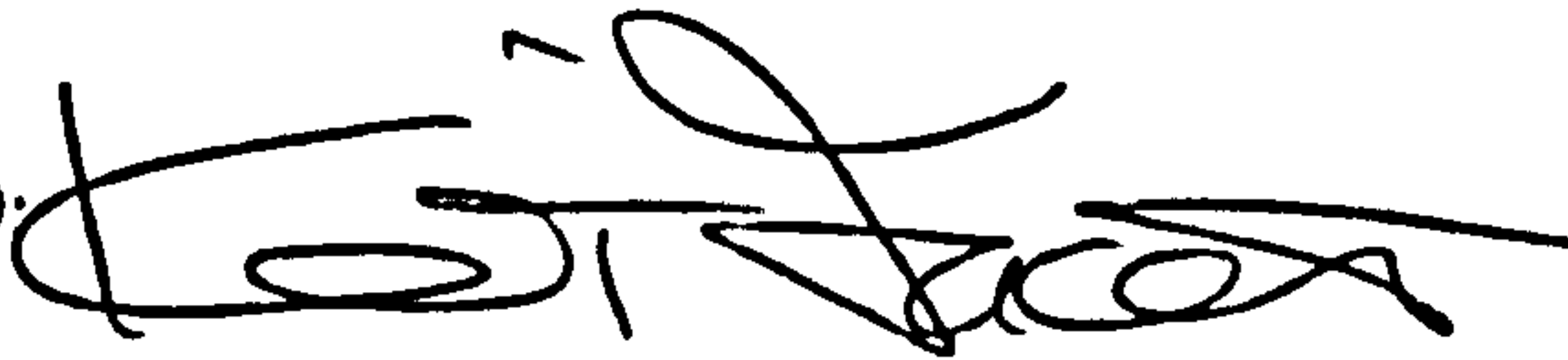
I also owe a debt of gratitude to the families involved in the ScreenPlay project, who not only let me into their homes, but fed and watered me and showed me the complexities of life beyond the narratives of the media and politicians.

And last, but not least, my thanks and love to my family and particularly to Craig, without whom I know I wouldn't have got this finished, nor eaten half so well during the writing of it.

Author's declaration

I declare that the work in this dissertation was carried out in accordance with the Regulations of the University of Bristol. The work is original except where indicated by special reference in the text and no part of the dissertation has been submitted for any other degree. Any views expressed in the dissertation are those of the author and in no way represent those of the University of Bristol. The dissertation has not been presented to any other University for examination either in the United Kingdom or overseas.

SIGNED:

A handwritten signature in black ink, appearing to be 'G. J. ...', written over a horizontal line.

DATE: 12/02/07

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List of Abbreviations

AOL	America On Line
BECTA	British Educational Communications and Technology Agency
BETT	British Educational Technology Trade (Show)
BT	British Telecom
CDA	Critical Discourse Analysis
DCMS	Department for Culture, Media and Sport
DFES	Department for Education and Skills
DTI	Department for Trade and Industry
ESRC	Economic and Social Research Council
ICT	Information and Communications Technology
IT	Information Technology
NCET	National Council for Educational Technology
NOF	New Opportunities Fund
OECD	Organisation for Economic Co-operation and Development
UN	United Nations

1 Introduction

1.1 Background

...something important is happening in the reconfiguration of adult-child relationships and [...] technology is implicated in it (Prout, 2005:121)

In the 1990s there seemed to be an emergence, in political, media and academic spheres, of a discourse that represented young people, through their use of information and communications technology, as an 'entirely new' generation, able to act powerfully and effectively in the techno-social formations characterised as the 'information society'. In these discourses, relationships between children and adults were turned on their heads as young people were presented as competent 'digital natives', while adults were presented as 'digital immigrants' reluctantly struggling to keep up with young people's facility with these new technologies¹ (McGrath, 1997; Negroponte, 1995/1996). In the popular press, anecdotes were recounted of young people making millions from websites set up in their own bedrooms, or hacking into Pentagon computers. Children's television of the period included a number of characters with significant powers as a result of their digital technology use (we need think only of Willow in *Buffy the Vampire Slayer* whose technical facility for hacking was set up in opposition to the adults' reliance on antique books and ancient runes). Major advertising campaigns for AOL and BT set up an opposition between parents unable to understand the new technologies and children who would patiently explain what email was for. In debates on the future of the so-called 'information society' within the political domain, children were presented as spearheading the information revolution:

Our children are already moving into the digital future. They are quickly mastering the tools that they will need for the new century. Some of us need to catch up. (John Battle MP, Hansard, 1997)

Representations of the active and technically competent child were, in turn, countered by anxieties that we were witnessing a 'contemporary crisis of childhood' (Steinberg and Kincheloe, 1997). These apparent instances of children's precocious

¹ Marc Prensky popularised the terms 'digital natives' and 'digital immigrants' in his book 'games based learning' in 2001, but he acknowledges his debt for these terms to JC Herz who coined them in the 1990s.

behaviour were greeted in some quarters as evidence of a decline in values and standards and as the potential corruption of the young by corporate interests (see Buckingham, 2000; Roszak, 1996; Rushkoff, 1996). The technologisation of childhood spaces, notably the home and the school, were presented as an erosion of traditional childhood practices of 'play' and 'creativity' and as potentially increasing socio-economic inequalities (Buckingham and Sefton-Green, 1998; BECTA, 2002; Rudd, 1998, 2002).

In this contested environment, it was unclear what precisely was happening to children themselves, but what seems certain is that ideas about childhood were changing in the context of the emergence of ideas of an 'information society'. As Alan Prout, leader of the new Social Studies of Childhood movement, argues:

ICTs destabilise the boundary between the public and private spheres and between adulthood and childhood. They help to create conditions in which the dependency of the child becomes problematic and in which the voices of minorities, including children, might be constructed and amplified. (Prout, 2005:141)

That new technologies should herald a debate on the nature of childhood and the future of society was not without precedent, indeed, by the 1990s, the changing media/technology landscape had been mobilised in the call for a radical reconceptualisation of education, of learning and of the relationships between adults and children for over twenty years albeit with little noticeable impact on the familiar institutions of childhood. Ivan Illich, in 1971 for example, argued that information was now so widely available and easily accessible, that schools, even adults, had lost their role as the sources of knowledge in our society (Illich, 1971), and Baugham and Claggett had argued in 1983 for a complete rethinking of schooling as a result of observing children's facility for learning mathematics through computer gaming.

By the 1990s, however, information and communications technologies were increasingly presented not merely as marginal entertainment or business efficiency tools, but as central to all aspects of economic and social life. A new 'planetary vulgate' was emerging which presented these technologies as responsible for a shift towards a new sort of society, variously an 'information society', 'digital age' or 'knowledge economy' (Bourdieu and Wacquant, 2001; Woolgar, 2002).

By 1996, then, discussions of children's seemingly 'natural' facility with digital technologies were no longer the concern only of those traditionally concerned with children's education, but of all those with an interest in the potential reshaping of society, economics and culture in the light of changed socio-technical formations. By 1996 Seymour Papert, a long-time advocate of educational change and computer use by children, was able to mobilise three overlapping discourses to argue for radical changes in the adult-child educational relationship: first, he argued that the interest of the telecommunications industry in searching out new markets in education would inevitably lead to changes in computer-based education; second, children's self-directed experiences of learning and working with computers in the home would lead to demands for new approaches to education for adults and children alike; and third, the growing emphasis on lifelong learning as a necessary outcome of changing work practices within an information society would lead to a need for new models of education.

Papert was able to locate the idea of the 'digital child' not only in the context of education and families, but the centre of the dominant discourse of political debate at the time, namely the debates over state and societal responses to the 'information society' (Papert, 1996). This new 'centrality' of childhood in changing socio-technical formations, he argued, would see an urgent need for change to happen in adult/child relations, and quickly.

What is of primary interest in this thesis, then, is whether in the mid-1990s this conjunction of new discourses of the 'information society' with ideas of children as 'natural' computer users (as 'digital natives') served to reconfigure ideas of children and childhood in ways which had previously been unachievable by earlier commentators.

1.2 Aims of the thesis

In this context, the overarching aims of this thesis are: to understand how the twin narratives of childhood and the 'information society' were articulated together in this period of emergence, to explore how competing discourses of childhood were played out and 'fixed' in this articulation, and, beyond this, to examine whether the

articulation of these discourses created conditions which could be said to be 'destabilising the boundaries between adulthood and childhood'.

These aims are not simply of theoretical interest; the boundary between childhood and adulthood is central to significant social institutions such as education and families, and its erosion potentially impacts on a wide range of areas of social life, from the public sphere, to the home, to the workplace. More significantly, 'childhood' acts as the 'cultural other' (Christensen, 1994) of 'adulthood', it is through defining the child that we understand what it means to be 'adult' (and vice versa). Understanding how childhood was reconceptualised in this period may therefore also allow us to explore how we are coming to understand 'adulthood' in the discourses and practices of the 'information society'.

Understanding any changes which may be emerging, developing a framework for such analysis, and exploring how the multitude of different voices at this period may come to be organised around new 'commonsense' understandings of childhood, is therefore clearly of pressing concern. This is particularly the case when, as some commentators have argued, the discourses of the information society may be understood to be reproducing and intensifying relations of social, cultural and economic inequalities (Schiller, 1996).

Many researchers have studied children's interactions with technology in this period, and mounted a trenchant critique of the universalising discourses of the 'digital child' of the 1990s by paying close attention to the lived experiences of children and families (see, for example, Facer et al, 2001; 2003; Holloway and Valentine, 2003; Sefton-Green, 1998; Buckingham, 2000; Livingstone and Bovill, 1999). Indeed, it was through a study specifically intended to challenge the 'grand narratives' of the digital generation that I became involved in research in this area (ScreenPlay Project, ESRC 1998-2001). There is some concern however, that while these different ethnographic interventions serve to problematise universalist claims, they may do little other than offer multiplications of different contexts rather than support the creation of social theory that can inform social action (Woolgar, 2002; Lee, 1998). As Strathern argues:

...the more ethnographically local studies became, the more new contexts (and new areas of ignorance) were opened up; every new perspective meant loss of others (Strathern, 2002:303)

Instead, Strathern argues, rather than attempt to find ever more contexts in which to locate technology (or childhood) we should attempt to understand why certain possibilities of action are already excluded/included in our *ideas about* and *representations of* technology (or childhood). In other words, we should

...consider instead how it is that virtual phenomena are regarded as 'out of context' in the first place. That is, what phenomena do the purveyors of virtual realities regard themselves as exogenous? What 'missing' realities are already contained in the way people think about virtual reality? (Strathern, 2002:304)

My aim in understanding 'what was happening' in the production of childhood in the late 1990s, then, is not to oppose the universalising discourses of the digital child with the lived experiences of particular young people, nor to attempt to uncover the 'real' child behind the discourses, but instead, to attempt to understand how the many and diverse *potential* 'realities' of children were selected and represented as commonsense views of childhood at the period. The aim is to understand why and in what contexts particular *ideas* of childhood in the information society were excluded, promoted, rejected or realised, and to explore how these different views may have come to be stabilised as 'commonsense' understandings of childhood which serve to inform social action.

The discursive struggles of this period, however, could be seen as not 'merely discursive' but as having distinct social effects. Different representations of children in the information age served as calls for action to reformulate education policy, to purchase computer equipment and hardware in homes and schools, to reconceptualise children's relationships with digital and physical space or to establish research programmes. These diverse representations of childhood and technology were mobilised as calls to construct new configurations of the material, discursive, technological and institutional arrangements of childhood across the multiple spaces of state institutions, domestic settings and virtual environments. If we have an interest in understanding whether, and if so how, childhood was 'changed' in the 1990s, then we need to engage not only with the 'ideas' we have about children in this period, but with the ways in which these ideas were mobilised

in creating consent for the establishment of new material, institutional and technological arrangements. As Buckingham argues:

There is a kind of circularity here. Children are defined as a particular category, with particular characteristics and limitations, both by themselves and by others – by parents, teachers, researchers, politicians, policy makers, welfare agencies, and (of course) by the media. These definitions are codified in laws and policies; and they are embodied within particular forms of institutional and social practice, which in turn help to produce the forms of behaviour which are seen as typically 'child-like' – and simultaneously to generate forms of resistance to them. (2000:6-7)

1.3 Research questions

Drawing on the above discussions, the thesis aims to address the following research questions:

1. how were children's relationships with digital technologies represented in the public domain in the late 1990s ?

for example, how did political and media discourse represent narratives of childhood and technology at this period? When and by whom were certain narratives presented or excluded? What structural constraints operated on the representations of childhood? What were the ways in which new representations of childhood were incorporated into or challenged historical representations of childhood?

2. how were the discourses of childhood and technology in this period mobilised to create consent for the reconfiguration of material and social practices in homes and schools?

For example, how and when were representations of childhood and technology used as warrants for the creation of new institutional and material childhood practices? To what extent did these practices serve to challenge or reproduce the public discursive productions of childhood and technology? To what extent were new configurations of childhood in conflict or accordance with pre-existing social practices?

3. to what extent were these representations and reconfigurations of material and social practices implicated in the redrawing of the boundaries between adulthood and childhood at this period?

For example, did the new configurations of childhood offer children social agency, challenge adult authority, create new relations between adults and children? To what extent were these new configurations incorporated into existing patterns of relationships between adults and children in different social contexts? How were 'adults' viewed to be changing in these contexts?

1.4 Methodology

This thesis takes as its focus a specific historical conjuncture (1997-2001) and a particular set of political, media and domestic discourses. It does so for two reasons. First, this particular period is selected because it coincides with the first term of the New Labour government in the UK, a term that was characterised by significant interest in both technologies and childhood, and also because this period in the UK and internationally represents a significant flowering of 'cyberbolic' discourse in which the 'planetary vulgate' (Bourdieu and Wacquant, 2001) of the information society was beginning to become established in diverse social, political and media fields.

Second, the thesis focuses on discourse because of an understanding that the ways in which we represent both childhood and technology are central to the ways in which these come to be 'enacted' in our social lives. Since Ariès (1973) *Centuries of Childhood*, the representation of childhood has been understood to be significant in shaping how it is we come to 'know', identify and classify children. This is not to suggest that children, per se, do not exist, but to suggest that the ways in which we represent children serve to act as filters through which we interpret their behaviours and, in turn, come to structure the contexts and practices of childhood. The classification of a person as 'child' makes available to that person certain actions and behaviours (Austin et al, 2003); and changes in the ways in which we classify 'childhood', in the meanings we attribute to it and in the behaviours we associate with it, are significant in shaping the institutions and practices we build for children. Similarly, discourses of 'technology' or the 'information society' are seen not as simple reflections of some external technical reality, but as practices of signification which serve to construct particular ways of interpreting and acting upon technological possibilities:

The social science of electronic technologies requires not just that we recognise the extent to which talk of definitive effects – the discourse of the definite – pervades rationales for the analysis of technology. It also requires us to understand the constituencies and networks within which such discourse takes hold and flourishes[...] We cannot simply take at face value the terms of the agenda set out in [these] rationales[...]the very fact that they work, make sense to, and mobilize an array of social constituencies means that it would be unwise simply to dismiss them. Their constitutive function makes them part of the phenomenon to be understood. (Woolgar, 2002:8)

This thesis, then, does not attempt to 'reclaim the real child or technology' of the late 1990s, but instead aims to understand how the different representations and ideas of childhood and technology emerged in this period to construct particular possibilities of new relationships between adults and children.

In so doing, it draws on the long history of debates in the social sciences concerning the relationship between discourse and society (for example, Gramsci, 1971/1987; Foucault, 1981/2000; Hall, 1980; Laclau and Mouffe, 1985/2001). While the resolution of this theoretical debate is beyond the scope of this thesis, it draws on the recent move away from the 'linguistic turn' in social sciences, which viewed social life as wholly discursively constructed, to a more dialectical view of the relationship between discourse and social practice (Sayer, 1992/2000; Chouliaraki and Fairclough, 1999). First, it adopts the view that the discursive production of 'commonsense' ideas of the world serves to act as a resource by which people come to organise everyday life and second, it draws on Gramsci's concept of hegemony to argue that the production of 'commonsense' ideas of the world is not a neutral nor disinterested process, but one which is deeply implicated in struggles for social power, in which social actors are differently positioned both in relation to the production of discourses and in relation to their internalisation of discourses in practice.

In respect of the first point, that 'commonsense' ideas act as a resource for social action, the thesis acknowledges both the power and the limits of the discursive; it acknowledges that the discursive realm (concretised in institutions such as the media, or political debate) serves to construct narratives, or legends of the world which make it more or less easy to conceive of certain possibilities of social action. At the same time, and in respect of the second condition, this view sees 'commonsense' ideas as both socially produced, and therefore implicated in pre-existing social relations and historical and cultural periods *and* as socially enacted, in which there are limits to the 'power' of the discursive in radically reshaping social reality (Silverstone, 1999). The distinction between this perspective and other 'stronger' versions of social constructivism can be summed up in Fairclough's argument:

We may textually construe (represent, imagine etc) the social world in particular ways, but whether our representations or construals have the effect of changing its construction depends on various contextual factors, including the way social reality already is, who is construing it, and so forth (Fairclough, 2004:230)

This approach is particularly significant when we consider the discursive production of childhood, as young people are primarily the recipients rather than authors of public discourses relating to childhood. They live in a world constructed for them by adults. This is not to say, as evidenced in the many and detailed ethnographic studies of children since the 1970s, that young people play no role in constructing their own narratives of childhood, or in constructing worlds of meaning which exist outside those predefined for them by adults (see Jenks, 1982/1996; James, Jenks and Prout, 1998); instead, it is to acknowledge that, probably more for children than for any other group in society, children live in a world in which ideas *about* them are fundamental in constructing the conditions in which they might live. As Austin argues:

Adults make decisions about the level and type of education a child receives, where children live and with whom they reside [...] Such decision-making is driven by theories of the Child, in particular, theories of children's rights, wants and needs. Such theorisations also drive commerce. Assumptions and beliefs about children and Childhood inform the design of toyshops, merchandise, fun parks, movies, books and food outlets. Those commercial enterprises that view children as a component of their clientele work, however implicitly or explicitly, with theories of the Child in the production, promotion and sale of their products (Austin, 2003:11)

Understanding how 'ideas' or 'theories' of childhood are produced, circulated, challenged or maintained, therefore, is particularly significant when it comes to this field of study.

The methodological and theoretical approach selected for the study is that of Fairclough's Critical Discourse Analysis. This approach combines Critical Realist ontological perspectives (which assume dialectical relations between discursive and material elements of social life (Sayer, 2002)) with concepts of *hegemony* and *articulation*, drawn from Hall and Laclau and Mouffe's reading of Gramsci (in order to explore the historically contingent strategies employed by social actors in producing 'commonsense' ideas of the world in an attempt to ally different social groups together in times of social change). This approach also draws on the

analytic tools and resources of detailed textual analysis. In so doing, it anchors analysis of discourse within a close reading of specific texts in order to understand how language *works on* reality to produce possibilities for social change (Fairclough, 2003). The thesis is also informed by the long history of studies of the media, and the changing understanding of the relationship between media texts and media audiences; in particular, it is informed by the development of 'critical' approaches to media analysis originating in the 1970s, and the more nuanced understanding of the relationship between 'media power' and audience reception of the 1980s and 1990s (Silverstone, 1999; McRobbie, 1995).

The focus for the thesis is therefore centrally on the discursive production of ideas of childhood in the information society, the negotiations and struggles involved in this production, and the ways in which these are mobilised in support of particular social strategies rather than on the children's lived experiences of the 'information society'. The data selected for analysis in this thesis are drawn from three sites which can be broadly categorised as the policy field, the media field and the domestic field. Specifically, the analysis focuses on 1) texts emerging from the 'New Labour' government in the 1997-2001 period, in particular speeches by Tony Blair, Prime Minister; 2) over 900 articles from national newspapers in the years 1997 and 2001; and 3) transcripts from interviews with parents and children in 16 families produced as part of an ethnographic study of children's computer use in the home in the years 1998-2000.

Analysis of the texts draws on the methodological approaches advocated in Chouliaraki and Fairclough's (1999) 'Critical Discourse Analysis' and on the tools for textual analysis proposed in Fairclough's (2003) 'Analysing Discourse'. These approaches advocate an analytic 'double vision' in textual analysis, which views texts both as, in themselves, working on reality and language to construct specific views of the world *and* a view of texts as elements within wider social practices, in which non-discursive elements interact with the semiotic to construct social reality. As such, in this analysis, texts are analysed both for their 'constructive features' (the work they do in shaping reality) *and* as 'windows' onto external reality (to provide access to associated ethnographic data for the period). This is particularly the case with the newspaper texts, which provide insights not only into how media practices

serve to structure and represent particular constructions of childhood, but which also provide access to a wealth of contemporaneous historical information, albeit pre-filtered by journalistic practices and the priorities of media institutions.

As such the thesis draws on the tradition in childhood studies of examining representations of childhood, such as Luke's 'Constructions of the Child Television Viewer' (1980), and Holland's (1992) 'What is a Child? Popular Images of Childhood', as a means of understanding how these representations shape 'commonsense' ideas of childhood. It adopts, in Oswell's (2001) terms, a 'centrist' as opposed to a 'supplementary' approach to the study of childhood, in which the 'figuring' of the child is seen as 'constituting more than the world of childhood' (173).

In a similar manner to these studies, however, the thesis could be accused of overlooking children's own experiences and interpretations of these representations. As a counter to this argument, I would suggest that the 1990s and early 2000s have seen a significant number of ethnographic studies of children's use of technologies in a range of sites; these serve to point to the limits of the adult discourses in wholly determining children's lives, and thus provide an important caveat to the conclusions I might offer in the thesis in respect of the ultimate 'power' of these discourses in shaping social reality. At the same time, however, many of these studies, including those on which I acted as a researcher in the period, have to date failed to reflexively examine the extent to which they too are implicated within the interpretive struggles over childhood of this period and have come to act as 'expert knowledges' in shaping our ideas of childhood at this time. The analysis in this thesis, then, is intended to act as a historical complement to these studies and a means of enabling us to read them differently within their discursive context. Of course, this also requires a reflexive acknowledgement that this thesis too will come to act, in part, as a contribution to the overall proliferation of discourses around childhood at this period.

1.5 Organisation of the thesis

The thesis begins, in Chapter 2, with an exploration of how it is that we can begin to ask whether 'childhood' is changing. In so doing, it examines the ways in which a commonplace understanding of childhood has emerged since the turn of the 19th Century, an emergence which has produced a particular culturally, historically and geographically specific view of childhood as characterised by conditions of dependency, separation from adult life, and lack of social agency. It then explores the ways in which the tools and discourses of the 'information society' are understood to be potentially challenging this view of childhood. The historical view of childhood, understood as the 'dominant framework' is explored in this chapter as a resource, or convention, for managing the potentially diverse range of 'childhoods' that are evidenced in the empirical analysis of childhood and technology. The chapter also provides a broad overview of the theoretical debates that have characterised the fields of childhood and technology studies, in particular, the ways in which, as with the wider field of social sciences, these studies have seen a shift away from an essentialisation of 'childhood' or 'technology', towards a view of both as being socially constructed in interaction with specific historical and social formations such as the State and the family.

The aim of the thesis is not to settle the arguments over the appropriate approaches to the study of childhood and technology; indeed, its aim is not to provide a more 'accurate' picture of childhood and technology at all. Instead, its focus is the analysis of the ways in which discourses of childhood and technology were intertwined in the late 1990s in the UK. As such, Chapter 3 provides a broad overview of the debates over the relationship between discourse and society, and focuses specifically on the approach advocated in Critical Discourse Analysis and its underpinning theoretical assumptions. In particular, it examines the concept of 'hegemony', and the theoretical approaches to its analysis in and through texts, specifically the processes of 'articulation, recontextualisation and colonisation/appropriation' drawn from diverse sources including Laclau and Mouffe, Hall and Bernstein. This discussion provides the theoretical basis for the remainder of the thesis and informs the discussion in Chapter 4 of the methodological approach adopted. This fourth chapter details the ways in which texts were selected for analysis, the analytical tools used in the analysis and the

approach adopted in respect of the standpoint of the researcher, as both implicated within and reflective upon the debates of the period. Specifically, it explores how the theoretical concepts of articulation, recontextualisation and colonisation/appropriation can be operationalised in close textual analysis.

Chapter 5 comprises an analysis of the representations of childhood in the political speeches of the New Labour government, and associated texts, in the 1997-2001 period. It focuses on the ways in which discourses of socio-technical change, characteristic of 'information society' discourses, were managed in government texts through specific constructions of the relationship between children and technology. It also examines the ways in which these texts 'worked' to produce consent for new institutional practices, in particular, new relationships between schools and homes evidenced in the National Grid for Learning initiative. The chapter also outlines the potential instabilities in New Labour discourse: first, originating from the establishment of relations of competition between 'schooled' and 'leisured' uses of digital technologies; and, second from long-standing commitments to raising standards and 'the basics' in Labour policy.

Chapter 6 focuses on the media representations of childhood and technology in the articles of national newspapers in the years 1997 and 2001. The cumulative analysis in this chapter aims to provide a broad overview of the specific historical and cultural conjuncture of the period by first, examining the broad trends in representational practices at this time through corpus analysis of the texts; then by creating a more nuanced picture through the detailed analysis of specific 'chains' of texts, including those relating to the 'reception' of New Labour political proposals, and those relating to the increasing prevalence of Internet technology in the home. It also explores the emergence of counter-discourses which attempt to fracture the New Labour articulation of educational transformation with basic skills, and examines the role of the media in producing new representations of the 'techno-family' in the home.

The texts analysed in Chapter 7 are drawn from a contemporaneous ethnographic study of children's use of the computer in the home. While this study generated a significant amount of data concerning children's computer use, the focus for

analysis in this chapter is primarily on the ways in which parents constructed their children's relationships with technologies through discursive, spatial and family practices. It explores how these families produced their own discourses of 'childhood and technology' in this period, and the ways in which they negotiated the potential emergence of both the home as a site for formal education, and the emergence of discourses of the 'digital child'. It examines how familial discourses of childhood and technology are articulated with existing family cultures and practices to create distinctive local ideas of the 'digital child'.

Chapter 8 addresses the three research questions by exploring how representations of childhood were contested and transformed across all three (political, media, domestic) sites in the 1997-2001 period, and argues that we witnessed the emergence of a new discourse which attempted to incorporate the concept of the 'active', technically competent child within educational practice. It connects this early articulatory process with the emergence of the 'personalisation agenda' in education policy after 2001, and discusses, drawing on the family and media texts, the potential implications of this for different households. It also explores the question of whether the new images of the child envisaged in the policy discourses of personalisation were inevitable outcomes of the discourses of the 'digital child', or whether the 1997-2001 period offers some indication of alternative adult-child relations which might be envisaged

Chapter 9 discusses the benefits and limitations of the research and the contribution it has made to knowledge in the field. It goes on to discuss the implications of the research for the researchers' own role in the production of discourses of childhood and technology, and to identify areas for further research and intervention.

2 'Childhood' and the 'Information Society'

2.1 Aims of the chapter

The aim of this chapter is to provide a broad overview of studies of 'childhood' in the 'information society' as context for the later analysis in the thesis. It does not aim to settle some of the outstanding theoretical debates concerning the nature of either childhood or socio-technical change but to discuss the ways in which research in these fields problematises essentialist notions of both childhood and technology. In so doing, the chapter provides a broad overview of the key debates in studies of childhood since Ariès (1973) *Centuries of Childhood*, the study which laid the foundations for the emergence of a historical and sociological understanding of childhood as, at least in part, socially constructed.

The chapter begins by discussing the ways in which we have come to understand our current form of childhood as a 'commonsense' phenomenon and examines how this emerged at the intersection of specific historic, economic and social forces and served to produce a particular 'dominant framework' for understanding childhood in western cultures today. It then maps out the ways in which researchers in diverse fields have identified the technologies, discourses and institutions of the 'information society' as potentially significant in challenging this 'dominant framework', specifically the relations between adults and children. Finally, and as a precursor to the next chapter outlining the theoretical underpinnings for the thesis, I discuss some of the key methodological and theoretical debates in the study of childhood and technology.

2.2 Introduction

To begin we need to ask how it is that we can begin to argue that 'childhood' is changing. To do so, we need to address what we understand by 'a child' or 'childhood'. Childhood, after all, as it is commonly understood and acted upon in the world, tends to be seen as an empirical biological fact, a clearly distinctive and unchanging category of human defined by biological age. A 'child', commonsense would have it, can be unproblematically defined simply by pointing at someone

who seems to be younger than 18; indeed, this is the basis of definition in the UN Convention on the Rights of the Child.

This understanding of childhood, however, has been challenged over the last thirty years by historians and geographers of childhood who, in the same way as other 'anti-essentialising' philosophers and social scientists argued in respect of categories such as 'race' or 'gender', have demonstrated that conceptions of what a child 'is' are subject to constant change and revision in different periods and different cultures (for example, Ariès, 1973; Holland 1992; Cunningham, 1995; Jenks, 1986; Walkerdine, 1997; James, Jenks and Prout, 1998). This is not to say that these commentators argue that children as such do not exist, but that our conceptions of what childhood 'means' and how it is then enacted in societies, far from being a universal constant, is socially and culturally produced.

Historical studies, for example, have discussed the ways in which child rearing, adult-child relations and schooling have radically changed over the centuries (Ariès 1973; De Mause, 1976; Postman, 1981). Comparative studies of childhood have demonstrated that across different cultures children are seen as dependent, and therefore occupying the status of 'child', for varying lengths of time, and within a multiplicity of different social arrangements (Hutchby & Moran-Ellis, 1998). Contemporary studies of childhood argue that this process of defining childhood is ongoing and that, far from being stable, the material and discursive boundaries between adults and children remain contested, with legal classifications showing that definitions of where childhood ends and adulthood begins remain variable in respect, for example, of children's sexual behaviour, economic activity and consumption of alcohol (Jenks, 1982). This deconstructive turn in the social sciences challenges the view of childhood as a universal phenomenon wholly determined by biology, and instead understands childhood as a socially and historically contingent classification. In this light, 'Childhood' comes to be understood as emerging through multiple and overlapping understandings, knowledges and practices of childhood, not least those of children themselves.

While the extreme social constructivist position, often labelled as the 'new paradigm in childhood studies' (James, Jenks, Prout, 1990/1998) has, in recent

years, been subject to sustained critique, it has also provided the basis for historical and comparative analyses, for a fracturing of the view of childhood as a biological phenomenon to be understood solely in relation to a continuum of development towards 'full adulthood', and for a new focus upon children's own role in producing 'childhood'. While I will return to some of these theoretical and methodological debates at the end of this chapter, specifically to the ways in which they foreground the need for an understanding of *representations* of childhood as significant in shaping the *practices* of childhood, I now turn to the different accounts which have been offered of the emergence of our dominant view of 'commonsense childhood'. For, if we are to conceptualise how childhood might be changing in the 'information age', we need to have a concept of what it might be changing *from*.

2.3 The emergence of the 'dependent' child

Philippe Ariès (1973) study *Centuries of Childhood*, proposed a shocking idea. Through an analysis of historical texts – pictures, diaries, tombstones, memoirs – he argued that, effectively, childhood as we know it today was 'invented' in the seventeenth century. He proposed that in medieval society infancy ended with weaning, from which age onwards children were considered as participants in adult society. While Ariès analysis has been critiqued from a number of perspectives (particularly for factual inaccuracies in data, over-generalisation from particular social and cultural groups and misinterpretation of evidence among other things), this thesis opened up the possibility for an analysis of childhood as changing over different historical periods. More importantly, it raised the possibility that childhood as we know it today, and the institutions that have been built to house and nurture it, are not inevitable consequences of biological familial relationships, but are products also of wider historical, economic and social changes.

The ensuing field of historical studies of childhood has produced a number of different accounts of the historical and social development of childhood to the one which we know today. The specific period of emergence of 'childhood', for example, is contested, as are the features that characterise it. For example, while De Mause (1976) identifies modern childhood as emerging as a result of changes to parenting, focusing specifically on a gradual decline in child abuse to the point at which the twentieth century saw the full emergence of nurturing 'adult-child'

relations; Postman (1983) sees childhood as emerging in the middle ages, with the codification of adult 'secrets' in print literacy, a process that, he argues, saw childhood 'disappear' with the development of audio-visual media such as television in the latter half of the twentieth century². While Buckingham (2000) offers an account of childhood as emerging through gradual processes of *exclusion* from adult spaces, Lee offers a counter-analysis of childhood as emerging through a process of building *extensions* for children through the multiple layers of family home and school (1998). It is not the aim of this thesis to provide a definitive answer to these multiple perspectives, many of which can be accused of themselves retrospectively interpreting historical artefacts through the lens of contemporary childhood practices.

Instead, it will suffice to provide a broad overview of the areas of relative consensus in this field. Central to these is the argument that childhood began to take on the forms and institutions which we now recognise as 'natural' to childhood (namely a segregation from adult life in the institutions of school and home, a view of childhood as a time of innocence which requires protection from adult life, and a sense of children as dependent upon adults) at some point in the 18th and 19th centuries.

Central to this formation in Britain were a number of factors, from changing industrial practices, the development of 'romantic' ideas of the child as innocent, and the need to generate workers for the Empire (Lee, 2001; Lavalette and Cunningham, 2002). A key development in this period (18/19th Centuries), was seen to be an intensification of interest in the young as a site of investment by the state, and the emergence of discourses intertwining 'childhood' and 'the future':

The young were being identified as embodiments of the future and, thus, as in need of special treatment. The modern state was a 'developmental state'. Reasons of state guided the treatment of children. It was in the interests of the

² Postman's argument that television and visual media are instantly comprehensible to all, and that there is no hierarchy of literacy is fundamentally undermined, I would argue, by the two chapters in his book dedicated to a sophisticated analysis of television media – thereby suggesting that there are numerous ways of 'reading' these texts. At this same time, his notion of literacy is one based on 'reading' rather than 'writing', of learning rather than producing written works – if literacy is conceptualised as full participation in the production and consumption of written or visual media, then the distinctions between adults and children in practice remain high even in an audio-visual environment.

state that children be separated from any sources of influence that might disturb the investments being made in them. (Lee, 2001:27)

Where previously, children had played an important role in the economic life of the working family, the late 19th Century saw the withdrawal of the child from public (and economic) life as the practices of bourgeois households were extended to the families of the working class (Lavalette and Cunningham, 2002). Laws were passed in this period both to limit children's economic activity and, later, to compel children's participation in mass schooling, with the 1918 Education Act effectively ending children's full time participation in the workforce (Stack and MacKechnie, 2002). The home and the school were established as, at least in principle, the 'proper' sites of childhood³.

Lee (1998, 2001) argues that this withdrawal from public life also saw a proliferation of familial and state networks of intervention, welfare and education, networks which were extended in the 20th Century to include the practices of childcare experts and the knowledges of 'child specialists' (particularly Piaget, Skinner and Freud). These knowledges and practices saw the emergence of a 'natural science' of childhood which positioned children as 'pre-competent' or 'pre-social' *becomings*, in comparison with adults as competent and social *beings*⁴, a classification of childhood which, in turn, served to build consent for social institutions which established relations of difference from and protection of children from adult life. These 'knowledges' of the child were mobilised in the establishment of practices of school organisation by chronological age, practices which served to produce a 'standard, administrable model of the clientele, of the Child' (Austin, 2003:21). At the same time, as educational provision was seen as needing to serve an ever wider group of people from diverse cultures in the twentieth century, schooling's mandate widened to encompass areas such as 'technical skills, a sense of civil responsibility, personal development, mental and

³ While this law may have prevented children's participation in full-time work, recent studies suggest that this did not prevent children from working entirely, with some accounts suggesting that up to two thirds of children have been involved in some form of work by the age of 16, and that this work is not restricted to 'children's work' but often involves children working in 'adult' roles, often in the service sector and often involving the sorts of health and safety risks that adults have to face (Stack and McKechnie, 2002)

⁴ Hobbs (2002) argues, however, that many of the social studies of childhood have misread psychological theories of childhood, and argues in contrast, that Piaget and Freud's accounts also contain evidence of their views of childhood agency and active production of meaning, rather than seeing them solely as 'pre-competent'

physical health, cultural awareness and all the rest' (Austin, 2003:22). This approach to schooling also served to produce particular categories of adult as qualified to inhabit the role of teachers, with implications for parents and other adults within the community (Illich, 1971); and to construct childhood as mediated primarily by the sites of home and school (Pollard and Filer, 1996).

This historical narrative is often said to reach its apogee in the form of the 'nuclear family' of the 1950s, which saw the development of firm family roles structured around the concept of the 'male breadwinner' and 'female housewife' producing the home as a site of protected innocence for children, dependent relationships upon adults and separation from adult life. While this period is one that is often the focus for nostalgic recall in contemporary concerns over childhood (and, arguably, nostalgia for stable employment 'for life') it is worth noting that, even at the time, the 'nuclear family' was probably more of an ideal representation than a lived reality for all families. Indeed, as Williams argues:

The nuclear family of the post-war world, with its male breadwinner, was a construction of what family life should look like. There were single parents in the 1950s (many were war widows, and more never-married lone mothers lived with their parents then than do now) and there were also working mothers, and same-sex relationships, but these did not fit the normative picture of family life. (Williams, 2003:18)

This teleological account, moreover, is also problematised by studies which have argued for the importance of recognising that multiple and conflicting 'ideas' of childhood can coexist at the same historical period. Austin (2003) for example, argues that schooling serves to produce not one but multiple forms of childhood (2003:23). While James, Jenks and Prout (1998), point to six distinctive ways of thinking and talking about children that have emerged since the middle ages and which, they argue, continue to be invoked at different times in debates around the nature and responsibilities of the relationship between the adult and the child, these ideas include (drawing on Rousseau, Locke, Piaget, Parsons and Freud among others):

- *'the evil child', in which the child is conceived as naturally unruly, close to nature, corrupt, with the function of childhood being a time of training to give rise to 'docile adult bodies';*

- the 'innocent child' in which children are seen as having a natural goodness and clarity of vision, with the function of adulthood being one of responsibility for nurturing healthy growth;
- the 'immanent child' whose mind is a blank piece of paper, a book to be written in, in which the child has the potential for reason;
- the 'naturally developing child', determined by biological impulses to develop in specific stages from lack of competence to adult operative intelligence;
- the 'unconscious child', in which the experiences of childhood become responsible for aberrant adult behaviour;
- the 'socially developing child' as one in which childhood is a time of learning to conform to social norms. (James, Jenks and Prout, 1998: 10-25)

This brief overview cannot hope to do justice to the complex historical production of childhood through discourses and representations, through institutions such as the school and the family, and through changing cultural, economic and social conditions. What is characteristic of these accounts, however, is the understanding that these interleaving developments have served to produce a relatively stable framework for understanding childhood today as characterised by a set of dyadic oppositions or relationships. Austin, for example, argues that:

Whatever the theorisation [of childhood] we see the persistence of a category of a person in need of something. A feature of Childhood in our culture always signifies a dependence relationship (Freebody, 1995) such as adult-child, parent-child, teacher-child' (Austin, 2003: 14)

Christensen (1994) argues that these oppositions served to constitute childhood as the 'cultural other' of adulthood. As Prout argues:

In particular it put into place a framework of meaning that constituted childhood through a heightened, dichotomised and oppositional relationship between it and adulthood. These oppositions are familiar ones and they include:

<i>Childhood</i>	:	<i>Adulthood</i>
<i>Private</i>	:	<i>Public</i>
<i>Nature</i>	:	<i>Culture</i>
<i>Irrational</i>	:	<i>Rational</i>
<i>Dependent</i>	:	<i>Independent</i>
<i>Passive</i>	:	<i>Active</i>
<i>Incompetent</i>	:	<i>Competent</i>
<i>Play</i>	:	<i>Work</i>

(Prout, 2005:10)

Central to these historical accounts, then, is an analysis of the relative stabilisation of relations between adulthood and childhood as being between adults as 'human beings' and children as 'human becomings', produced both through discourses and ideas about childhood, and through institutions of state and family. This oppositional relationship, and the institutions which it produces and sustains, is characterised by researchers of childhood as 'the dominant framework' of childhood, and it is this dominant framework that is seen by researchers to be undergoing change in the new discourses and techno-social relations of the 'information society'.

2.4 Childhood in the 'information society'

Contemporary childhood is not comprehensible without considering these socio-technical dimensions [...] They [...] provide instances of the assemblages of culture and nature, of society and technology, and of discourse and materiality to which those studying childhood must give their attention if we are even to begin to understand the trajectories that childhood will take. (Prout:100 & 141)

The following section does not claim to provide a comprehensive overview of all research relating to the potential implications of digital technologies for childhood and society, to do so would be outwith the scope of this thesis. Instead, it outlines the broad themes of potential transformations in social practices and in our understanding of identities which have been explored since the advent of the personal computer in the early 1980s. In so doing, it highlights the overarching 'narratives' of socio-technical change in this period, and the ways in which these are understood to offer potential challenges to the dominant framework of childhood.

However, it has to be acknowledged that, as with all claims to significant societal change, detailed and localised ethnographic studies have problematised the claims to 'universality' to which these broad themes pretend (Caron, 1989; Giacquinta et al 1993; Nixon, 1998/1999; Sefton Green, 1998; Downes, 1998; Facer et al, 2001b) . For example, just as social studies of childhood have emphasised the heterogeneous and local experiences of childhood, so too have researchers in the fields of media and technology challenged universalising claims about a 'digital generation', either through detailed ethnographic case studies or through statistical surveys that highlight social and economic differences. What is clear from these studies is that while these technologies may be potentially transformative, their

significance for social actors is always produced in interaction with and through the pre-existing social landscape. Wheelock (1992), Gray (1992) Debare (1996) McNamee (1998) and Benyon (1993) for example explore the ways in which domestic technologies are appropriated within existing gender relations in the household and the school, while Cassell and Jenkins (1998) examine the embedding of gender relations in the design of digital technologies; Facer and Furlong (2001), Jordan (1992) and Livingstone and Bovill (1999) identify the ways in which access to and use of technologies is patterned along socio-economic lines.

At the same time, while the discourses of the 'information society' presume and promote the concept of 'universal transformation', sustained empirical research has challenged both the uniformity and the scope of such change. The empirical basis for claims of social change as a result of the introduction of technologies are challenged on the grounds that measurement of such changes often confuses 'quantity' of information flows with 'quality' of information flows (Webster, 1995; Silverstone, 1999). The unevenness of distribution of access to technologies along socio-economic, gender and geographic lines is highlighted by many researchers, and foregrounds a sensitivity to the fact that the 'information society' is emerging along very different lines in the North and South (see for example, Schiller, 1996; Loader, 1998; Wresch, 1996). A key set of 'counter-intuitive' research findings was produced by the ESRC Virtual Society? Programme, which comprised 'five rules of virtuality' intended to problematise the universalising assumptions of the discourses of the 'information society', these were:

Rule 1: The uptake and use of the new technologies depend crucially on local social context

Rule 2: The fears and risks associated with new technologies are unevenly socially distributed

Rule 3: Virtual Technologies supplement rather than substitute for real activities

Rule 4: The more virtual the more real

Rule 5: The more global the more local

(Woolgar, 2002:13)

While retaining a scepticism towards the extent of change in the lived experiences of children in the information age, however, what is of interest in this thesis is the ways in which the emergence of digital technologies and the concomitant discourses of the information society, may serve to open up the potential for new

ideas about what childhood might be or become. My interest in this research is, therefore, not one of 'testing' research accounts against an objective knowable 'child' in the information age, but rather to understand the ways in which such research highlights the emergence of potentially new 'ideas about' childhood at the present time. Necessarily, then, and in full recognition of the fact that technological change is likely to play itself out within rather than in direct replacement of existing social contexts (and social inequalities), the following discussion focuses on themes of change rather than continuity in the research literature.

2.4.1 *Changing identities*

Central to sociological and psychological studies of technology in recent years, has been a concern with the question of 'identity'. The 'cyborg' – part human, part machine – is presented as a dominant metaphor for identity in the digital age. Haraway's (1991) 'Cyborg manifesto', for example, radically challenges the notion of identity as bounded by the body, while Turkle's (1984) 'Second Self' presents the computer as the screen onto which we project and with which we construct our identities. From a different discipline altogether, socio-cultural psychology argues for a radical shift in our understanding of 'mind' and 'thought'. 'Mind' these researchers argue, should be considered a form of 'mediated action', in which the tools we use structure the possibilities of thought (Wertsch, 1991). Rather than being located solely in the individual, cognition is increasingly seen as 'distributed' across the tools and people we encounter in our lives (Perkins, 1993a; Salomon, 1993).

Questions of identity are also problematised with the use of digital technologies which enable social interaction in which the representation of the individual is separated from the body. The opportunity for 'play' of identity, for role-play, for self and mis-representation in on-line communities has been a significant feature in recent studies, particularly in the field of on-line games and chat rooms, in which the opportunities for adoption of different, not to mention multiple personalities raise significant questions about what we mean by the very terms 'real' and 'virtual' identities in an age of digital technology (Jones 1997, 1999; Bruckman, 1996). From surprisingly different perspectives psychology, sociology and critical cultural studies have come to conceive the boundaries of human identity, human mind and the

human body as significantly more fluid and extensive than was previously acknowledged. Within this context, the new digital technologies are understood to offer new ways of being human, new ways of thinking, new body/technology relationships as identity is produced through and in interaction with other resources: it is a hybrid formation rather than a discrete autonomous state.

In the 1980s and 1990s there were a number of analyses of childhood which argued that we were witnessing the development of a new form of childhood 'identity' produced in interaction with the 'global media complex'. Children growing up in this period, many researchers argued, were cognitively and attitudinally different from previous generations as a result of their interactions with new media. These children were conceived as 'hybrids' of child-machine, as 'cyberkids' or as 'post-modern student-subjects'. A key provocation was made by Green and Bigum in 1993, who argued that:

...quite different youth and student subjectivities are currently forming out of the relations and practices of the new information technologies, and hence radical shifts are required in the social and educational imagination regarding young people, schooling and popular culture. (Green and Bigum, 1993:119)

Similarly, other researchers argued that children's interactions with digital technologies were leading to children developing fundamentally new approaches to 'playing' with representation (Snyder, 1998; Kress, 1998), to learning (Gee, 2003), to schooling and knowledge (Papert, 1980; 1993; 1997), to social space and global relationships (Crang and Thrift, 2000; Massey, 1998). Researchers with a psychological disposition conducted experiments on children's cognitive processes in interactions with digital technologies (Greenfield, 1984), sociologists of childhood examined children's expectations of interactions in global media spaces (Abbott, 1998; Green and Bigum, 1993; Bruckman, 1996). This research, and the increasing interest in 'distributed cognition' and situated learning, drawing on the Russian school of psychology, have also led for calls to rethink educational practices as organised not around the 'autonomous' individual, but as more properly conceived of in the concept of the 'person plus' (technology) (see for example, Salomon, 1993b).

At the same time, the potential of digital technologies to facilitate many-to-many communication of information (particularly in the form of websites, news groups, mobile digital communications) has also been heralded by some as a capacity which will challenge the dominance of economic and political power in the management of access to information (Katz, 1996; Owen et al 2006). It is no longer necessary to have access to the resources of national or international media companies to communicate internationally, it is no longer necessary to have expertise in film-making and editing to capture and present images of the world around you to a significant audience. These digital tools, it is argued, have the potential to transform information flows and hence, relationships of social and cultural power.

That these tools offer a lower threshold of expertise and experience, and fewer institutional barriers to their use than traditional tools of cultural production, has been cause for some commentators to argue that they hold the potential for children to act alongside adults as cultural producers, able to make their voice heard in the media landscape (Sefton-Green and Buckingham, 1998). At the same time, the 'play of identity' possible in online spaces discussed earlier, also potentially enables young people to participate as equals in online communities, working as peers with adults in the production of cultural artefacts. Analysis of fan fiction sites, for example, has produced rich stories of young children and older professors working alongside each other as peers in the creation of fictional narratives (Squire and Steinkuhler, 2005). Examples of young people as expert producers in previously adult domains have been highlighted (Abbott, 1998), online environments have been presented as spaces in which young people are forming new social groupings, acting as teachers and experts for each other within online communities (Gee, 2003; Tobin, 1998; Williamson & Facer, 2003).

These arguments serve to challenge core concepts of the dominant framework and to open up the possibilities for children to take on new identities as producers of media texts and as teachers of adults. Children in much of this literature are conceived as 'aliens in the classroom', a new hybrid generation whom adults are ill-equipped to 'prepare' for a world characterised by information and communications technologies.

2.4.2 *Changing identities 'at work'*

A key transformation in identity is also identified not in the micro level interactions between individual and machine, but in the macro level transformations of economic practices in the world of work, usually characterised by the term 'information society'. This classification of state and societal practices as having entered a distinctively new phase is based on the premise that the proliferation of information and communications technologies have led to an 'informational mode of development' in 'developed' economies, in which the 'action of knowledge upon knowledge itself [is] the main source of productivity' (Castells, 1996:17). As digital technologies increase the potential capacity of global organisations to manage and distribute workforces around the world, shifting production of goods to sites of low-cost workforces, economic competitiveness (for individuals, for companies, for nations) is increasingly constructed in terms of 'knowledge' or 'information'. Rich nations are seen to be dependent upon 'value-added' activities, in which the production and management of new knowledge and 'intellectual property' is seen as increasingly important in comparison with the development of older manufacturing industries. This 'new work order' produces a conception of a new form of worker identity, the 'self-programming' worker, with the capacity

constantly to redefine the necessary skills for a given task, and to access the sources for learning these skills. Whoever is educated, in the proper organisational environment, can reprogram him/herself toward the endlessly changing tasks of the production process' (Castells, 1996)

The new 'worker identity' is seen as requiring skills of collaboration, teamwork, creativity, innovation, flexibility and knowledge production and management (Gee, Hull, Lankshear, 1996; Olds and Thrift, 2005):

In particular, we can see much greater attention being paid to attempts to produce 'knowledgeable' subjects – by harnessing tacit knowledge, by producing communities of practice within which learning is a continuous activity, by working with and making more of affect, by understanding the minutiae of embodied time and space, and so on. In other words, a partially coherent set of practices of 'government of the soul' is starting to be produced by the cultural circuit of capital, a kind of instrumental phenomenology that can produce subjects that disclose the world as one that is uncertain and risky, but that can also be stabilised (in profitable ways) by the application of particular kinds of intense agency that are creative, entrepreneurial and businesslike. (Olds and Thrift, 2005:275)

In these discourses of the 'new' worker, the 'human capital' of the state is seen as its most powerful asset, and the State's primary responsibility is seen as shifting from one of 'insuring against misfortune', to 'proactive management of investment' in this human capital, namely, in children (Jenson, 2006).

The changing construct of the ideal worker has potentially profound implications for our ideas of 'childhood', and for the role of childhood in society. At the same time as the 'ideal capacities' of the 'self-programming worker' are extolled, for example, longstanding romantic ideas of the 'child' itself, and their relationships with digital technologies, are held up as a model to which all 'workers' should aspire. Jenson describes this as a shift towards a LEGO™ paradigm in state educational policy:

"children are our role models. Children are curious, creative and imaginative ... lifelong creativity, imagination and learning are stimulated by playful activities that encourage 'hands-on and minds-on' creation, fun, togetherness and the sharing of ideas. People who are curious, creative and imaginative, i.e. people who have a childlike urge to explore and learn, are best equipped to thrive in a challenging world and be the builders of our common future⁵." This quote from the corporate web site describing the company's philosophy illustrates at least three features of what we term the LEGO™ paradigm. First, while LEGO is a toy, involving play, it is also about a life-long commitment to learning in order to work. Indeed, play is work because work is – supposedly – creative and playful. Second, this philosophy is future-oriented. Children now are already creating the future. Ensuring intergenerational solidarity will depend on what happens to them. Finally, for LEGO, successful play in childhood benefits more than individual children; it enriches our common future. Activity in the present is beneficial for the community as a whole. This discourse of constant learning, knowledge acquisition, involvement, and engagement captures a good deal of thinking about the knowledge-based economy of the present as well as the need to invest now to ensure collective advantage in the future. (Jenson, 2006:8)⁶

These discourses, combined with an intensification of focus on investment in human capital, serve to produce the child as both the 'natural' repository of state investment and, paradoxically, as 'naturally' (i.e. without intervention) as the ideal

⁵ It is worth noting that Seymour Papert, author of *Mindstorms* and *the Children's Machine*, has been closely linked with the development of LEGO through MIT. There are clear convergences between the discourses of the active 'digital child' as presented in his writings and the construction of the LEGO child as evidenced in this website quotation.

⁶ The LEGO paradigm identified by Jenson, however, could also be 'read' as a revisiting of the longstanding historical 'idea' of childhood as the 'keepers of the true values' of humanity, first voiced by Locke and Rousseau, but more recently by Adams in the 1970s and his advocacy of 'childlike' adulthood (see Holland, 2006:98).

model for worker identity. This concept introduces a potential ambiguity into the dominant framework, maintaining, as it does, the concept of the 'innocent' and naturally developing child, but at the same time, producing 'childhood' as the state to which adults should aspire.

2.4.3 *Changing families*

Jenson (2000; 2004; 2006) argues that these changing conceptions of 'worker identity' lead to a decentring of the adult as the primary focus of state attention in favour of the child, with profound implications for the relationship between the state and the family. Indeed, where the 'dominant framework' had produced the home and the nuclear family as the primary means of protection (in Lee's, 1998, terms) from malign influence, Jenson argues that current policies serve to separate out the child from the family as a focus for investment, and indeed to construct the home, and parents, as potentially malign influences:

In previous policy paradigms, children were not targeted specifically, families and adults were. Now [...] childhood experiences of disadvantage are understood to have long-term effects, and preparing the future proactively, including by spending on children and their human capital, is sometimes considered more important than protecting adults against the misfortunes of the present [...] They are the 'good investments' for the future, while those categories of the population that are labelled 'poor risks' (including the parents of many of such children) are increasingly treated as a pool of inexpensive labour to be shifted from social assistance into the labour force, often via a form of workfare. (Jenson, 2000:269)

In parallel with this, and from a different perspective, the UN Convention on the Rights of the Child for the first time separates out the rights of the child from the rights of the parent⁷, a separation that problematises the relationships between and rights of parents with regard to their children:

Essential to our understanding of modern childhood, particularly in the UK, is the diminution of parental, particularly paternal, rights over children and the growth in the importance of parental duties, obligations and responsibilities towards children. It is clear that absolute paternal authority is no longer the main organiser of generational and gender relations in domestic and institutional life. However, discourses of children's vulnerability and need for protection

⁷This convention has been ratified by all UN countries with the exception of the United States which has specifically opposed it on the grounds that 1) they did not want to privilege children's rights over parents and 2) they wanted to maintain the right to inflict the death penalty on children

continue to coexist, sometimes uneasily, with discourses of children's right to empowerment and self-determination. (Brannen and O'Brien, 1996:3)

Williams, in support of this thesis, argues that these changes are accompanied by transformations in the relation of the state to the family. Where previously 'parenting' was considered more 'private' than 'public' and sexual relationships (such as marriage, same sex relationships) were subject to state intervention and public morality; today, she argues, this position is reversed to one in which state regulation of adult roles in families is no longer of sexual or marital relationships, but of *parental* relationships:

Law and policy [...] uncouple marriage from parenthood. That is to say, what came under scrutiny was not the relationship between husbands and wives (whether one had behaved more badly than the other or whether they were married) but their responsibilities as mothers and fathers (and therefore the welfare of their children). The message these shifts in policy carried was that marriages or cohabitations may break up, but parents responsibilities for their children continue. (Williams, 2004: 30)

The traditional roles of the (idealised) nuclear family are also reported to be unsettled as a result of other changes which are implicated within, if not necessarily caused by, the perceived transformation to an 'information society'. First, in a context in which adults no longer expect jobs for life, in which 'upskilling' and 'lifelong learning' are promoted by government, the relatively stable oppositions between adulthood and childhood are seen as subject to erosion, as adulthood is increasingly seen not as a time of 'being' but as a state of constant reinvention, constant learning, constant 'becoming'. As Lee argues:

In this age of uncertainty, even adults begin to find it hard to reach the standards of standard adulthood (2001:138)

At the same time, the increasing numbers (and necessity for, in an aging population) of women in the workforce, the emergence of the 'visibility' of domestic labour, and the loss of certainty of relationships as 'lifelong' is said to have produced new relationships in the home. While Giddens argues that we are witnessing the emergence of 'confluent' relationships, based on constant negotiation and evaluation (1992), Beck argues that we are witnessing 'the democratisation of the family', as a destabilisation of marital and parental roles is seen to lead to a process in which children are conceived as shaping families

alongside parents (1995). These changes are heralded by some commentators as a move towards more fulfilling social relationships based not on dependency but upon negotiation to achieve mutual respect, happiness and satisfaction (Williams, 2004). New media technologies are also understood as central to a shift in the practices of consumption in the home. The introduction of television into the home, and the exposure of children to choice from which to have a say in purchasing decisions has produced new identities for children as 'consumers' both in their own right and in negotiation with their parents (Buckingham, 2000; Lee, 1998). This 'individualisation' thesis is, however, contested. Williams (2004) for example, talks about the ways in which these changes are experienced differently by men and women in relationships, and argues that we are witnessing not the 'individualisation' of familial life, but the continuing commitments to care of both children and the elderly in family life⁸.

At the same time, the concept of the family as the primary 'site' of childhood is contested in recent research. Increases in divorce rates, for example, are seen to lead children to actively construct networks of support and nurture outside the family home (O'Brien et al, 1996); different family cultures see children participating in work-family contracts in which children are expected to participate in family and community businesses (Solberg, 1996; Song, 1996); and of course the home is not a site in which all children are automatically safe and protected from adult violence (Harden, 2000; Slater, 1998). Inversely, as the period of time that children are expected to remain economically inactive and in full time education increases, so too, are parents expected to take on different roles, whether as educators in the home (Buckingham and Scanlon, 2001) or being required to compensate for the removal of historical bridges into employment for young people (Land, 1996).

Interestingly, others have argued that this context of instability and uncertainty in the family and in economic and social life has led to the perception that 'while economically useless, western children have become emotionally priceless,

⁸ Williams' analysis powerfully challenges the arguably profoundly gendered interpretations of 'individualisation' with a detailed documentation of the ways in which caring, consideration and maintenance of social ties remain central to family practices

requiring from parents high investment and intense emotional involvement' (Brannen and O'Brien, 1996:3).

These research accounts seem to offer a number of challenges to the taken for granted assumptions of the 'dominant framework' of childhood: they offer a view of the family as a site of negotiation and consumption; they offer a challenge to concepts of standard adulthood; they offer a view of children as a focus of state attention over and above the rights of parents. As such, they destabilise the narratives which have underpinned the institutions in which childhood has been produced since the mid 20th Century.

2.4.4 *Changing social risks*

The narratives of the 'information society' are also seen to be producing new accounts of social inequalities and new definitions of social risks in the literature. Social inequalities, in this context, are redefined as inequalities patterned around the contours of access to and use of digital technologies, inequalities which are often seen as an intensification of pre-existing socio-economic structures (Schiller, 1996; Sefton-Green, 1998). They are also redefined as 'identity' risks: for each 'self-programming worker' described by Castells, there are also 'generic workers', whose operational skills can be easily replaced:

These 'human terminals' can, of course, be replaced by machines, or by any other body around the city, the country or the world, depending on business decisions. While they are collectively indispensable to the production process, they are individually expendable (Castells, 1997:340)

Indeed, there are increasing concerns that the future world of 'high-tech industries' will not provide a market for 'high-tech occupations' for all (Selwyn, 2000a, Apple, 1997). At the same time, there is an increasing argument that such social risks will increasingly be managed, not wholly by the state, but by individuals (Beck, 1992; 1994). Bauman (2005) locates this shift within a wider historical analysis of the relationship of 'risk management' between the state and society. He equates 'pre-modern' societies with 'gamekeeping states', where the primary role of the state was to protect and manage the size of the population; and 'modern' societies with 'gardening states', where the primary role was to invest in and nurture the population for the future. This is broadly coterminous with historical analyses of

childhood and suggests that childhood institutions and practices as we know them today emerged in the formations of the 'gardening state' (see Lee, 2001). Today, he argues, we live in 'liquid modernity' in which there is no state protecting our interests, or (in counter to Jenson's argument) investing in us (or our children). Instead he offers a metaphor of the 'hunter':

We are all like game hunters now, or told to be hunters and compelled to act like hunters, on the penalty of eviction from the hunting world; and in case we don't repent and correct our ways, the penalty may mean relegation to the ranks of game ourselves (Bauman, 2005:307)

Social risks, in this analysis, are privatised, managed by the individual. If we combine this admittedly pessimistic analysis, with Jenson and Williams arguments that we are witnessing a decline of the family and a focus on investment primarily in the child, is it possible to conjecture that we may be entering a phase in which social risks are to be managed not by adults for children, but by the child themselves. This would be a radical transformation of the dominant framework if it were the case.

2.4.5 *Changing spaces*

The organisation and structure of communications in the digital age is also seen as impacting on 'traditional' patterns of social, cultural, spatial and temporal practices. For example, the proliferation of channels of communication raises significant questions about the uses of such media in constructing shared cultural (national) identities – whereas traditional broadcast media had been seen as bringing people together, the emergence of multi-channel, multi-medium information and communications channels are seen as fragmenting identity into specific 'niche markets' (Morley 1992; McRobbie, 1995). The advent of international telecommunications networks and the development of an increasingly global media complex allowing the dissemination of images and messages in seconds around the world has been, particularly after the emergence of the World Wide Web in the 1990s, cause for considerable reanalysis of the spatial practices of social life (Massey, 2000; Crang and Thrift, 2000).

These new technologies are seen to problematise notions of public/private space, (as images from around the globe are beamed into sitting rooms and bedrooms

(Morley, 1990; Lupton, 1998)) and as in themselves constituting new social spaces (Jones, 1997; Squire, 2005). At the same time, the development of a global media complex in which individuals in sites as diverse as France and India are able to point to shared cultural references, generates a reawakening of McLuhan's vision of a 'global village', 'shrinking' the world in terms of time and space and generating a global cultural space (Castells, 1996; Giddens, 1991). This shared global cultural space is, however, seen not as a uniform 'global' experience, but as one which is appropriated and negotiated in specific local contexts, producing a process of 'glocalisation'; a dialectical relationship between the specific/local and the universal/global (Massey, 1998).

Cultural and childhood geography has historically paid significant attention to the ways in which childhood is constructed not only temporally, through the perception of biological maturity, but spatially, through a delineation of 'childhood spaces', of areas in which children are and are not allowed to be present (Holloway and Valentine, 2000). Indeed, organisation of space has been understood as central to the organisation of childhood: as Massey argues, 'the control of spatiality is part of the process of defining the social category of 'youth' itself' (1998). The emergence both of a 'global media complex' and of first television and later the Internet as resources which allow a child to 'virtually' travel potentially problematise the spatial construction of childhood. The 'private' space of the home becomes semi-public and the child becomes a potential actor in this space through interactive technologies; the creation of common global references across different countries creates potentially close ties between children which exclude adults at the same time as they produce a new form of 'global' youth culture. In both these cases, the control of childhood spatiality, and with it the use of space to *define* what we understand by childhood, is weakened and potentially transformed:

From their fingertips [children today] can traverse the world. They have powerful tools for inquiry, analysis, self-expression, influence and play. They have unprecedented mobility. They are shrinking the planet in ways their parents could never imagine (Tapscott, 1997:3)

These reconfigurations of spatial practices and relations render children 'out of place' and potentially problematise the production of childhood within the

dominant framework as located in private spaces and as associated primarily with the family.

2.4.6 *The 'special relationship' between children and technology*

One key strand in this literature which draws upon and draws together all the preceding themes, is the emergence of a perception of a 'special relationship' between children and technology. The 'information society' is described as the 'natural environment' for young people, both by sociologists of the 'state' (as in Jenson's analysis of the 'LEGO paradigm above), by sociologists of education such as Green and Bigum:

For most adults the digital ecology in which we now find ourselves grew up around us and we have adapted accordingly, some more readily than others. Our young were born into it; it is their natural environment. For them, the high density of communication vectors is entirely and unequivocally natural, something which they learn to adapt to, to use and to exploit, just as we learned to adapt to the sparse electronic ecology in which we grew up. (Green and Bigum, 1992:135)

and by psychologists such as Seymour Papert:

Across the world there is a passionate love affair between children and computers...They seem to know that in a deep way it already belongs to them. They know they can master it more easily and more naturally than their parents. They know they are the computer generation'. (Papert, 1996:1)

What emerges in these research accounts is the idea that we are witnessing the potential emergence of a 'new form of childhood' that is radically different from those which had preceded it, and which challenges the ability of adults to act as guides and mentors in the digital world. This tendency reaches its apotheosis in populist texts of the period which construct children in the late twentieth century in the concept of the 'digital native' or 'digital generation', which presented children as leading the way and actively shaping the powerful forces of information and communications technologies while adults lag behind:

Children are at the epicenter of the information revolution, ground zero of the digital world...Children have the chance to reinvent communications, culture and community. To address the problems of the new world in new ways (Katz, 1996)

In today's world most adults would do very badly as kids. There are many more complexities, ambiguities and differences...because we have an information access which reaches across the planet. And now it is not only available to banks, airlines and media moguls, but to children as well. Kids can empower themselves and see new notions of work and play, society and self, teaching and learning – concepts which no longer have these crisp lines separating one from the other' (Negroponte, 1996 p x)

Children, rather than being in a dependent relationship with adults in this discourse, are represented as 'naturally' competent and as better equipped than adults to cope with the challenges of an information and technology rich environment. The dominant framework, in these accounts, no longer applies.

2.4.7 Summary

The research in this field suggests the potential for a radical transformation of ideas of childhood: from the image of the 'dependent child', living in relations of protection in the confines of the home and the school, to a new concept of the 'active child', potentially capable of acting effectively in the world to some degree independently of adults and in interaction with the new spaces and practices of digital technologies. As discussed, this concept highlights both powerful new roles for children and new capacities as active agents, but it also indicates the potential development of new 'risks' to children as unprotected managers of this new environment. It also highlights the ambiguity in current perceptions of childhood – as both 'model for' the ideal 'self-programming' creative worker, and as site for the intensification of investment for the future. This review of the research arguments has provided an outline of the broad 'contours' of change that are identified as *potentially* transforming relations between adults and children. These accounts are presented, in Critical Realist terms, as the potential 'generative effects' of the relations between children and technology. Their realisation as actual effects, the extent to which these ideas are enacted, rejected or stabilised in popular 'ideas' of childhood, the extent to which they come to act as commonsense resources for organising our thinking about children in day to day interactions and in the institutions and resources we build for them, however, is dependent on the extent to which such ideas 'travel' from the discursive field of the academy to the popular discourses of the media, domestic and political spheres. The processes by which they might come to 'travel' are explored in the next chapter in my wider discussion of hegemony.

2.5 Theorising 'childhood'

Before moving on in the next chapter to discuss the specific theoretical approach I will take in this thesis, it is worth briefly summarising the broad points of contention that have characterised the social studies of childhood since Ariès *Centuries of Childhood*. This book emerged in the context of academic radicalism, feminism, a growing sensitivity to cultural history, a move to produce histories of the 'everyday' and 'from below', and popular political movements including free-schooling, children's rights and student movements (Holland, 2004/2006:xi), all of which served to problematise previously taken for granted assumptions about the relationship between 'nature' and 'culture', and called for a renewed attention to the 'voices' of previously marginalised groups⁹.

The theoretical and methodological debates of the social studies of childhood since this time centre around a number of key oppositions, which are framed within the dyads of the dominant framework such as 'culture/nature', or 'active/passive'; at the same time, these studies also evidence different orientations to the 'ontological' status of 'childhood'. These different orientations cut through many of the analyses of childhood in the 'information age' described above, and indeed are characteristic of wider debates in the social sciences as a whole since this period.

Approaches to childhood studies can be broadly categorised (after Oswell, 2001), as 'supplementary' or 'centrist' approaches which respectively locate childhood either as a distinct social site and category which requires analysis and understanding in its own terms (supplementary), or view the analysis of childhood as a central element of society through which wider social, discursive and structural relations can be understood and explained (centrist). The distinction between these views can arguably be overstated, and both positions have their strengths and weaknesses as I shall discuss later, but for now, it serves to provide a useful framework within which to structure a discussion of the different theoretical and methodological approaches to 'childhood studies' since the 1970s.

⁹ This is not to suggest that childhood and children were not studied before this publication; Darwin's detailed observations of his daughter, the Opie's transcriptions of childhood play, Piaget's experimental interventions, the Chicago school's analysis of 'delinquency' all form key, if historically specific, benchmarks in the study of childhood and youth before this period. What is significant about this starting point, however, is that it offers, as discussed in the introduction to this chapter, the beginning of a debate surrounding the limits of adult 'knowledges' of children, and the emergence of an understanding of 'childhood' as historically and socially constructed.

2.5.1 *Supplementary approaches*

Nature/culture

As discussed earlier (Section 2.3), a central contribution of historical analyses of childhood was to ‘decentre’ the study of childhood from the biology of the child to accommodate the role of the cultural shaping of the child. By arguing for the role of social knowledges, social practices and social institutions in serving to produce particular forms of childhood, researchers in the social sciences had a means of challenging understandings of ‘childhood’ as necessarily defined by and emerging through a series of pre-determined ‘natural’ stages. The location of childhood as ‘social’ was seen as a means of ‘pris[ing] the child free of biological determinism’ (James et al, 1998:28), and consequently as a way of ‘liberating’ the child from the institutions and practices built upon biological and social knowledges.

While the readings of both biological and psychological studies in these accounts could be argued to oversimplify both perspectives (see, for example Prout, 2005; Hobbs, 2002), this challenge to the ‘nature’ of childhood served to open up studies of childhood in a number of interesting ways. In the first instance, it opens up the possibility of inquiry into *different* forms of childhood; second, it offers the opportunity to engage with children in exploring their own understandings and production of childhood¹⁰; third, it provides a basis for challenging the view of childhood as ‘naturally’ a categorisation of human beings which should lead automatically to their subordination to other human beings. This ‘cultural’ turn, it was suggested, enabled the development of childhood studies as a study of children on their own terms, rather than on the terms prescribed by adults to describe children¹¹.

¹⁰ One of the predominant critiques of the methods of both natural sciences and psychology by the ‘new paradigm in childhood studies’, was that the pre-existing frameworks of development conceived in these accounts obviated the need to engage with children’s own accounts of their experiences, their development and their particular circumstances.

¹¹ This, clearly, is a problematic claim given that it is (usually) adults who construct research agendas for childhood, and adults who take the primary interpretive role in analysis. More recently, however, there have been attempts to challenge this dynamic with, for example, the establishment of programmes aimed at supporting children as social researchers at the Open University, the increasing interest in ‘children’s voices’ evidenced in ESRC series such as ‘Learner Voice’, or the development of guidelines for consulting with young people, such as those offered by Save the Children

Recently, however, the extreme form of ‘social constructivism’ which characterised the self-styled ‘new paradigm in childhood studies’ (James et al, 1990 & 1998) has been somewhat modified. Indeed, we are beginning to witness a revival of interest in ‘the biological’ and an increased interest in interdisciplinary collaboration across social and natural sciences, a trend mirrored in the wider social sciences. This shift could be understood from a number of perspectives, in the first instance, there was a widely held concern that the ‘strong’ social constructivist and relativist positions left researchers unable to challenge certain practices such as, in the extreme, genital mutilation of children; in the second instance, I would argue that a form of social studies of childhood which fails to account for the possibility of difference (while not assuming this is determining) in biological attributes of the child from the majority of adults, is in danger of isolating itself profoundly from the realm of political and social action.

One response to this shift has been Prout’s interest in the emerging field of socio-biology; in this account, childhood is seen as emerging not *either* through ‘nature’ or ‘culture’ but in inter-relation between the two. This shift can be understood within the wider critiques of ‘modernist’ sociology (Latour, 1993). Prout argues that instead of privileging either ‘culture’ or ‘nature’ in accounts of childhood, we need to understand that:

The relationship between body and society is reciprocal: society works on the body, just as the body works on society. As well as its evolutionary and genetic histories, the body has a social one and because these are co-produced these histories become fused together. (Prout, 2005:105)

The implications of this theoretical return to biology, for accounts of childhood which advocate political action and a view of children as citizens, as ‘beings’ rather than ‘becomings’, is not, however, clear from Prout’s most recent account (2005). Indeed, while this approach usefully challenges the binary distinctions in much theorising of childhood (not only nature/culture, but body/technology, for example), its usefulness as an explanatory or critical approach to the social study of childhood is arguably limited to description. Prout’s concept of ‘hybrid’ childhood, drawing on Actor Network Theory, for example, which posits a view of childhood as produced in interaction between biological, material and technological elements,

while providing useful sensitising concepts for the analysis of the formation of childhood (as in the example below) provides little explanatory purchase:

The approach I advocate here, therefore, is concerned to look at the locales of childhood not as 'containers' but as places constructed through flows of heterogeneous materials. Schools, for example, are related to other schools, to households, playgrounds, after-school clubs, firms, local authorities, trades unions, ministries, courts and so on. People cross these boundaries bringing with them different and conflicting ideas, experiences, ideals, values and visions (all the things that make up discourses) and different material resources. Things also pass across the boundaries and play no less a part. These include texts, such as the curriculum guidelines, teaching materials, letters laying down funding policy and so on; and machines (such as computers) that work in this way rather than that, or facilitate that rather than this possibility for learning and so on. The hybrid 'actants', people and things, that flow in and between different settings all play a part in constructing what emerges as 'childhood' and 'adulthood' there. It is by tracing these flows that we can come to understand them better. (Prout, 2005:82)

Active/passive

There is little doubt that one of the most productive outcomes of the understanding of childhood as socially and historically contingent, was in the increased attention that was subsequently paid to children and young people's own accounts of childhood. While taking multiple forms, and informed by a wide range of different theoretical and political agendas, childhood research since the 1970s has frequently been characterised by attempts to listen to, account for and understand the 'voices' of children and to understand young people not as 'becomings' to be socialised, but as active agents constituting their own worlds of and meanings for childhood.

A number of key theoretical (and arguably political) advances have been achieved in this process. In the first instance, an increased engagement with children and young people's own accounts of 'childhood' served to produce an awareness of the limits of the adult world in defining childhood for children. The research tradition emerging from sociology and subsequently understood as 'cultural studies', for example, paid significant attention to the artefacts which young people use to construct their worlds (an attention which was characteristic of this period's increasing interest in popular culture as a whole). These analyses identified the ways

in which young people 'made use of' the resources around them to construct personal, group and 'counter-cultural' cultures of youth and childhood.

The Centre for Contemporary Cultural Studies, for example, through detailed ethnographic studies with young people such as *Learning to Labour*, and *Subculture: the Meaning of Style*, presented a picture of youth subcultural practices as an informed and conscious set of choices developed to overcome the class contradictions embodied in the schooling and work choices open to these groups. While the 'consciousness' of such forms of resistance to dominant (adult) cultures was later challenged, these studies served to problematise the assumption that adults could 'read off' childhood/youth from social formations without engaging with young people's own interpretations of their experiences. The increased attention to young people's perspectives also informed a shift in family studies, away from a conception of the child as defined by and through the family, to an interest in children's own interpretations and experiences (Brannen and O'Brien, 1996; Williams, 2004). The possibility of childhood constituting a 'different world', a distinct ontological category with the same status as gender or ethnicity, moreover, arguably led to the emergence of a new commitment to 'listening to children's voices' in all areas of social life, a commitment enshrined in the UN Convention on the Rights of the Child (McKechnie, 2002).

A significant contribution of these studies was to envisage 'childhood' and 'youth' as also existing outside the family home and the institutions of state, and to make visible the other networks with which young people are connected, such as peer groups and popular culture (Skelton and Valentine, 1998). These other networks have been located as central to the production of identity and the negotiation of boundaries between adult and childhood worlds. The emergence of 'global' youth identities and spaces (conceived as a shift from 'roots' to 'routes') is also understood to generate new hybrid global/local identities emerging in and across different geographical locations:

A so-called 'local' youth culture [is] not a closed system of social relations but a particular articulation of contacts and influences drawn from a variety of places scattered, according to power-relations, fashion and habit, across many different parts of the world. (Massey, 1998, p124)

The theoretical advances made in this area also led to significant interest in children's 'uses' of the media, an approach characterised by ethnography and interviews with young people, which challenged the argument that 'the media' could have predetermined 'effects' on young people (for example, see Buckingham, 1993; 1994; 1997). Instead, they argued, the 'meaning' of these media texts was produced discursively and in interaction with children's socio-cultural context. As with the interest in popular culture, these studies need to be understood within the wider history of communications and media research which saw a shift away from analyses of the 'ideological effects' of media producers to a renewed interest in the agency of media audiences in the 1980s (Silverstone, 1999; Gunter, 2000).

These approaches, then, saw young people as active agents in challenging adult accounts of childhood, as resistant interpreters of media messages. These early analyses, which were significantly informed by challenges to determinist accounts of ideology, were later developed in studies which demonstrated the role of young people not only in creating their own 'meanings' for childhood, but in actively policing and maintaining the boundaries between childhood and adulthood in everyday interactions (Skelton & Valentine, 1998; Solberg, 1990; Buckingham, 2000). Childhood, these researchers argue, is not only constructed by adults for children, but 'performed' by children in ways that change at different times and in different places.

Solberg (1990:12) for example has argued that 'Conceptually children may 'grow' or 'shrink' in age as negotiations [with parents about what they are deemed responsible enough to do around the home] take place'. Similarly, some people may be legally defined as adults yet may resist this definition by performing their identity in a way which is read younger than they actually are' (Skelton & Valentine, 1998: 5)

The focus in ethnographic studies of childhood on identifying instances of childhood 'agency' as a basis for challenging dominant views of the 'passive child', however, has recently been criticised by other researchers. In the first instance, such approaches are accused of eliding with, rather than critiquing, the construction of young people as consumers (Lee, 1998; McKechnie, 2002). In the second, such accounts are accused of ignoring the conditions within which childhood agency is 'pre-structured' for children by socio-economic and historic

contexts (McKechnie, 2002; Goldson et al, 2002; Furlong and Cartmel, 1997). As Brannen and O'Brien argue, while the modern child may be a

'strategic actor' using varying modes of action dependent on the nature of the context and as such is 'neither passively socialised nor thought to possess a unitary identity' still 'it is also important to take account of the fact that children vary greatly in their access to the material and cultural resources upon which they need to draw in their negotiation of the complexities of modern life' (Brannen and O'Brien, 1996:4-5)

The 'solutions' to such challenges of understanding the forms and limits of childhood agency are multiple and contested. There is a trend, however, to a closer engagement with the conditions in which children's 'agency' is constructed. Lee, drawing on research in social studies of technology, advocates an approach to understanding childhood agency, indeed any form of agency, as an 'assemblage'. This entails a more detailed analysis of how 'agency' is achieved through the ability to mobilise and draw on resources (both material and human) to 'extend' the voice in such a way as to have impact on the social world.

The assemblage/actor network approach to agency does not assume that agency is or can be 'possessed' by people in independence of their surroundings. The principal advantage of this approach is that, since it does not assume that agency is a simple possession, it opens agency up to empirical study and analysis. We can ask what a given person, whether adult or child, depends upon for their agency. So with this approach to agency, instead of asking whether children, like adults, possess agency or not, we can ask how agency is built or may be built for them by examining the extensions and supplements that are available to them (Lee, 2001:131)

The 'assemblage' approach to the analysis of childhood, requires an engagement with the material, discursive, technological formations which are built around children and, through this, to examine the types of 'childhood spaces' which are constructed for 'childhood'.

Clearly, these questions of the relation of agency/structure, of interpretation/text, of ideology/resistance transgress the boundaries surrounding research in 'childhood studies' and come to require an engagement with the dominant themes of recent debate in the social sciences as a whole which will be discussed in the next chapter.

Commonality/particularity

A specific concern of 'childhood studies', arising from the perception of childhood as historically contingent, is the question of what commonalities can be assumed across different forms of childhood. In other words, is there a category of childhood that can be understood as 'universal' for the purposes of political and social action and should this take primacy over other forms of social and cultural classification such as ethnicity, gender or social class?

The turn in the 1970s to a focus on 'youth studies' and to a concern with children's voices was, for example, profoundly critiqued by feminist researchers as universalising male (and arguably white, working class) experiences of 'youth' to all children (McRobbie, 1991). These researchers identified significant differences in the leisure experiences of young women as compared with young men (although it has been argued that this work over-emphasised the activities of those women and girls who identified themselves primarily with 'hyper-femininity', rather than those who rejected traditional constructions of female identity (Chambers, 1998 pp14-19)). Similarly, Marxist researchers critique the concept of youth as a primary classification, arguing, for example, that:

we wish to stress the class-specific elements that divide children. In particular we do not accept that all children are oppressed in modern society: to put it at its most crude, we fail to see any oppression affecting the lives of the Royal children of Britain, and we fail to see what they have in common with those who live in inner-city slums (Goldson, 2002)

Geographical and post-colonial studies, moreover, served to produce a critique of 'universalising' discourses of childhood emanating from the West, with accounts of radically different forms of childhood experiences across different cultures (Hutchby and Moran-Ellis, 1998). Childhood, from these perspectives, is understood as a fragmented category of multiple experiences structured in and through existing gendered, classed and ethnic formations:

it is increasingly recognised that there are now different kinds of childhoods or youths, as distinct from one simple unitary model as can be universally applied even within one society (Seston-Green, 1998:5)

And yet, there is seen to be political expediency in assuming a concept of a 'universal child'. For researchers, their self-definition as 'childhood researchers', serves to constitute and delineate a field of research, justify demands for research funding and challenge the long history of 'sociological blindness' towards children. While in the political field, the identification of the 'universal child' enables the enshrinement in law of certain rights previously overlooked. The justification for these universalising tactics may be that, while childhood is potentially less defining of children's life experiences than their gender, race or class, the act of 'classification' as child has profound consequences for the ways in which their lives are ordered and the extent to which they are able to act in and upon the world. While problematising the assumption that childhood can be understood as a homogeneous category of person, therefore, it focuses attention on how the production of childhood as a universal classification of person is achieved over and in the face of these differences, and in the extent to which this universalising classification comes to have effects in the world.

2.5.2 *Centrist approaches*

This perspective brings us to what has been labelled the 'centrist' approach. This approach views the production of 'childhood' as a classificatory and representational process, premised on the production of 'commonsense' understandings of childhood which serve to act as resources for structuring the practices and institutions of childhood and, through this, society as a whole. While challenged for its failure to engage with young people themselves, this strand of research takes as its particular focus the production of particular 'ideas' of childhood in structuring social relations. As Oswell argues, this approach 'understands the figuring of the child as constituting more than the world of childhood' (2001:173).

The dominant approaches in this field draw on Ariès founding analysis in being determinedly textual in their analyses, with an emphasis on the visual representation of childhood (for example, Holland, 1992; 2004/2006; Higonnet, 1998). This is not to suggest that these researchers conceive of social life as wholly discursively constructed, but rather that their object of inquiry is not 'the real child', but the functions of representations of the real child as a means of organising social

relations. For example, Rose's 1990 analysis of the cultural mutations of 'Peter Pan' provided a trenchant critique of the function of 'ideas' of childhood in the practices of adulthood and consumption, while Holland, in her analysis of visual representations of childhood, argues that she is concerned with

a set of narratives about childhood which are threaded through different cultural forms, drawing on every possible source to construct stories that become part of cultural competency. These stories without a single author explore [...] potent themes [...] – family relationships, sexuality, nature, schooling and education, violence and the very limits of humanity itself. They organise patterns of expectation which sediment into a broader set of public meanings and become an active part of the mapping of social, political and emotional worlds. They make it possible for daily lives to continue and meaningful actions to be undertaken (Holland, 2004/2006: 3)

The primary concern of these approaches is to understand how ideas of childhood come to be formed and circulated. They address a different set of questions from supplementary approaches (which are primarily concerned with understanding young people's own experiences of the world), for example, they ask 'who has the resources to produce these images? What sorts of claim do they make to authenticity' (Holland, 2004/6:4). In so doing, they engage precisely with the questions 'how is it that we come to understand childhood as either natural or cultural, as active or passive, as universal or particular?' and to explore the conditions, historical, cultural and economic, which underpin the emergence of different views of childhood at different times. In so doing, they offer a complementary and contextual account of childhood within which supplementary analyses of childhood can be understood. Indeed, it is frequently with reference to these deconstructions of taken for granted assumptions that most empirical analyses of children's lives commence.

The process by which these narratives or ideas 'sediment into patterns of expectation', however, is sometimes under-theorised in these accounts, with the result that they can be accused of overstating discursive power in relation to social action (Oswell, 2001). This does not, however, undermine the validity of the aims of the 'centrist' enterprise, but rather, requires a renewed attention to an explicit theorisation of the relationships between 'the discursive' and the social, a theorisation I will turn to in the next chapter.

2.6 Moving forward

This thesis, then, could be understood as adopting a 'centrist' orientation, in that its primary concern is not with children's own voices, or children's own lives, but with the ways in which the 'concept' of childhood is discursively produced in discourses of technology in the late 1990s. This orientation is adopted for a number of reasons, not least the fact that while the discursive features of the information society have been implicated in social studies with creating consent for radical changes in social and economic practices (Woolgar, 2002; Bourdieu and Wacquant, 2001; Gee, Hull and Lankshear, 1996; Fairclough, 2004), these public discourses are relatively little acknowledged in childhood studies which, in the main, has focused its research attention on children's interactions with and views of such technologies¹². This orientation is also informed by my own view of the centrality of the relationship between discourse and society in shaping the conditions for social change, and in respect of the preceding arguments concerning the significance of practices of representation in the processes of shaping childhood for children. Finally, this orientation also arises from a concern with understanding the implications of such discourses of childhood, not for children alone (as some accounts would propose), but for practices of adulthood and the ways in which we are coming to 'play out' these discourses of the information society more generally.

At the same time, however, I would not argue that a centrist approach presupposes (as Oswell does) a rejection or ignorance of 'supplementary' perspectives. Instead, it is in fact premised on the acknowledgement that there are always many and multiple ways of understanding or representing childhood, and that these contested and *different* views need to be worked on in order to be presented as 'natural' or

¹² When we look at studies of children and technology, these are primarily focused in the 'supplementary' camp, in which the concern is to problematise universalising claims of socio-technical change, and to engage primarily with children's practices and interpretations of digital media. Hutchby and Moran-Ellis's (1998) 'Children, Technology and Culture', for example, included no empirically informed critique of the discourses of the 'information society' and the ways in which these positioned children. Holland's analysis of popular imagery, for example, dedicates only 1 page to the 'electronic future', and does not relate any other social changes evidenced in her analysis to the wider socio-technical changes of the 'information society'. A key exception to this tendency is exemplified in Helen Nixon's analysis of the production of popular discourses of the information society and childhood in Australia, which argues that 'fun and games mean serious business'. In this, she identified the ways in which political and industrial discourses conspired to generate new forms of 'commonsense' for childhood. To date, however, there have been few studies which have taken this approach and used it to track the hegemonic practices of social actors in the specific context of the UK.

‘commonsense’. The concept of a discursive practice of persuasion to a ‘dominant’ view of childhood presupposes, in itself, alternative views. As Silverstone argues, rhetoric can be considered an ‘open fist’ in that

it signals recognition that in the world of human beings, in matters, for example, of law, politics or ethics, there will always be differences of opinion, with no guarantee of their resolution’ (1999: 32)

The multiple accounts of socio-technical change discussed in section 2.4 for example, suggest that in the analysis of discursive representations of childhood in the information age, we are dealing with a site of contestation and challenge, in which the *potential* for the emergence of a wide variety of different forms of childhood is far from assured in its achievement. The balancing of insights from the ‘supplementary approach’ within the theoretical and methodological aims of the centrist approach, I would argue, enables a perception of the limits of discourse and of the potential for such discourse to stimulate resistance. These insights also generate an awareness that in analysing ‘ideas’ of childhood we are not merely looking for instances of representations of ‘nature or culture’, or ‘activity or passivity’, but for the ways in which such discourses serve to create consent for the relative stabilisation of childhood within material and institutional arrangements which come to create different conditions of childhood agency and different relations between adults and children. Any ‘centrist’ analysis has to be informed by theories, by ‘ideas’ of childhood, and a reading of supplementary analyses, of detailed and localised ethnographic work with young people, serves to create a more nuanced analytic framework for such analyses.

3 Theoretical Underpinnings

3.1 Introduction

In the introduction to this thesis I focused on emerging discourses of children, technology and society because, as Bingham and Valentine (1999) have argued,

if the intellectual tradition of the last thirty or so years – structuralism and post – has taught us nothing else, it is that stories, or discourses if you prefer, are never merely stories. Rather, the stories we tell can be seen as ‘modes of ordering and telling’ (Law, 1994) as ‘legends’ which both recount a narrative and provide a key to a map of the social world, by building ways of navigating the world [...] highlighting very different features, making some things more ‘doable’ than others (Bingham and Valentine, 1999).

Stories, discourse, language, as we have seen in the preceding chapter, are seen as central to studies of both childhood and technology, as it is through these that classifications of what childhood or technology *mean* at different times and in different cultures are constituted.

If we are to understand the role of discourses of socio-technical change in shaping ‘childhood’ in the late 1990s, however, we need to explore the nature of the relationship between ‘language’ and ‘social reality’. This is a debate that draws in much of the recent history of the social sciences and its final resolution is clearly beyond the scope or aims of this thesis. But where to start? In an account of the relationship between language and reality, or language and power, which takes the form of a linear text, it would be possible to read off my first discussions as ‘causal’ of the second, third and so on, and thereby to create the impression of a coherent narrative of sequential development towards a final resolution of the theoretical problems, which enlightened position would, clearly, be the approach to analysis adopted in the remainder of the thesis. Starting with Marxism, working through structuralism, post-Marxism and postmodernism and concluding with Critical Realism, for example, would create a teleological account which misleadingly ignores the multiple and overlapping relations of ideas and methodologies between these strands. Alternatively, I could begin with the challenges offered to traditional linguistics by socio-linguistics and ethnomethodology, and through these provide an account of the development of a multi-layered understanding of the relationship

between discourse and society. Both these histories and stories need to be told, but to present one first – the history of the analysis of social relations underpinning language use, for example – would be to offer primacy to social relations in determining language; while to present language as the initial subject for discussion runs the risk of reducing social relations into functions and effects of language.

How to provide a dialectical account of these relations without ultimately reducing them to simplistic narratives of cause and effect in the development of social theory? The route I propose to take is to focus on four key terms as a basis for exploring the ontological and epistemological debates which have informed them. These terms, taken from Critical Discourse Analysis, are selected specifically because they enable an engagement with the questions at the heart of this thesis – namely, how particular ‘ideas’ of childhood come to be formed, come to be stabilised and come to create conditions and consent for new social formations.

Through these terms, ‘articulation’, ‘hegemony’, ‘recontextualisation’ and ‘appropriation/colonisation’, it is possible to explore a wide range of different tensions in the theorisation of language and society. Specifically, discussion of ‘articulation’ focuses attention on how meaning is produced through the linking together of concepts and through the linking of these concepts with elements of the ‘non-discursive’ realm; it allows a focus on the relationship between ontology and epistemology. The term ‘hegemony’ allows an examination of how language functions as a site for and means of struggle for political power, in the attempt to render articulations ‘natural’ or ‘ideological’ in their denial of contingency. The term ‘recontextualisation’ serves as a focus for the uneven and historical patterns of meaning making, the emergence of particular ‘magnetic lines of force’ which articulate certain discursive conventions with specific institutions, interactions and fields. The terms ‘appropriation and colonisation’, focus specifically on the dynamic and historical transformations in language that occur at the level of social practices which act as a site of mediation between social structures and social agents.

So, this will not be a linear historical account, but an attempt to engage with the key theoretical debates in the field without reducing them to a narrative of positivist progression towards theoretical ‘enlightenment’.

3.2 A brief history of articulation, epistemology and ontology

Norman Fairclough's use of the concept of *articulation* (drawing on Laclau and Mouffe and Stuart Hall) offers a useful means of engaging with the challenge of understanding the ways in which different social elements are combined to form relatively stabilised meanings in social life and language. Articulation is itself an 'articulated' term; it condenses within it concepts from linguistics and psychoanalysis, and from Marxist and structuralist accounts of society. From a theoretical perspective, articulation is not, in Stuart Hall's terms 'precisely anything' but could be considered both a theory that acts as a sensitising tool for exploring the role of language in society, and a method for analysing social relations (Slack, 1996).

From one perspective (the post-Althusserian tradition of Stuart Hall), 'articulation' can be understood as a means of describing how different elements (or levels) in society are linked together. As a means of challenging the idea that all social relations could be understood as fundamentally economically determined while retaining a sensitivity to social structure, 'articulation' was conceived as a way of describing the links between different social formations (for example, between the economic and the ideological). In this way, 'articulation' was seen as foregrounding the concept of 'relative' stability in social formations, but also the possibility for their 'disarticulation' and their 'rearticulation' in different formations of elements. The focus for social (or cultural) researchers was to understand how, and in what conditions, certain elements of the social came to be linked together. The term functioned, in the first instance as a 'sign to avoid reduction' (Chen, 1994, quoted in Slack, 1996), as a way of

signalling other ways of theorizing the elements of a social formation and the relations that constitute it not simply as relations of correspondence (that is, as reductionist and essentialist) but also as relations of non-correspondence and contradiction (Slack, 1996:117)

In this context, but drawing on other research traditions, notably linguistics and psychoanalysis, Laclau (1977) attempted to formulate a 'theory of articulation'. This is distinguished from what I would call the cultural studies approach of Hall, in its specific focus upon articulation as a process of constituting social formations

through micro-interactions of language. This constituting effect arises from a profound challenge to the coherence of individual 'elements' of the social or the linguistic which derived from studies in psychoanalysis and linguistics in the mid-twentieth century. These studies profoundly destabilised understandings of the role of language in social life. Far from being a 'transparent window' clearly representing the world, researchers in these disciplines argued that language needed to be understood as profoundly unstable, its regularity of meanings achieved only through convention and use. This instability was seen as originating in two key concepts from different fields: first, in Saussurian¹³ concepts of a split between 'signified' and 'signifier' (in which the representation of an external referent was understood as distinct from that referent); second, in Lacanian psychoanalytic concepts of meaning being constructed through processes of opposition and internalisation, rather than through internal 'intrinsic' meaning (Jaworski and Coupland, 1999).

To give a random example, the word 'cow' is a symbol for a living, breathing, grass-eating mammal, it is owned in the west for the purposes of producing milk for human consumption but also venerated in India as a holy animal with significance in many religious rituals etc etc etc. The multiplicity of ways in which we can describe 'cow' both highlights the split between the signifier (the word 'cow') we use to name it, and the thing 'itself'. The meaning of 'cow' in language is achieved both through invoking these multiple meanings and through the process of delineation that this naming achieves (in other words, to name something 'cow' is also to define what it is *not*, not dog, not human, not fish, for example). In the name 'cow', we see a classificatory practice emerging which condenses multiple potential meanings in one, and also which delineates its meaning from a background of potential other meanings. To name something 'cow' is therefore also to embed in it 'the Other', the 'not cow'. To name is both an act of condensation of meanings and an act of differentiation from and internalisation of other meanings. Yet because we cannot exhaust the range of meanings which could be attributed to 'cow', nor limit the differential relations established, the act of

¹³ While Saussurian linguistics was understood as generating a tightly controlled understanding of language which fundamentally separated it from studies of language in use, the conception of signs as non-transparent and non-neutral representations of the world arguably opened up the possibility of all subsequent language analyses, whether sociolinguistic, pragmatic or interactional (see Fairclough, 1992 for further discussion)

naming is understood as profoundly unstable, it is always a contingent and temporary act of classification.

Drawing on these perspectives and on the Althusserian concept of 'overdetermination' Laclau offers an account of language use as a process of articulation, in which articulation is understood as an ongoing process of combining together different (but not essentially predetermined elements) in relations of equivalence and difference. To talk of 'the cow', for example, and to assume a shared understanding with others as to its meaning, is to combine together (to articulate) different connotative meanings in relations of equivalence with each other, and to establish relations of difference between these meanings and others. Because each element has a multitude of 'meanings' (consider, for example, the term 'Woman') the articulation is never complete, and is also produced on top of differences within these meanings (if not, we are talking about shared identity). This opens up the concept of 'articulation' to mean, not simply a process of 'linking' elements of the linguistic or social, but a process of changing and shaping these elements to create new ones. In this sense, articulation can be understood as 'the production of identity on top of differences, of unities out of fragments, of structures across practices. (Grossberg, 1992:54)'. Articulation, in this account, is understood as a central element of the ongoing process of meaning making. The fundamental divide in social theory in response to this account, however, arises around the extent to which processes of articulation are understood to be constitutive of, rather than a means of classifying, describing and giving meaning to, social life. Here we witness a profound tension between traditions understood as 'social constructivism', and 'social realism'.

Laclau and Mouffe's (1985) argument was to suggest that the processes of articulation were the processes by which social formations could be brought into being. In creating relations of equivalence between social groups around shared ideas, they argued, new social formations could be produced. The articulatory and discursive process was one which constituted social groups, rather than the other way round¹⁴. This theoretical move, combined with the deconstructionist methods of Derrida, led to 'strong' social constructivist accounts of social reality,

¹⁴ This reading should be interpreted in its context, which was its aim of challenging the argument that social formations were necessarily and reductively associated with particular groups or classes.

exemplified at its extreme, for example, in Grint and Woolgar's defence of the role of the discursive in constructing social reality. In the argument 'what's social about being shot?', they progressively and systematically define the ways in which discourses of the world inform even our most material existence, from the ways in which 'guns' are represented in different societies, through the social production of different healthcare systems, to the ways in which 'death' is understood to occur at different points and mean different things in different cultures (Grint and Woolgar, 1997: 154).

The 'realist' counterpoint to this argument was to argue for a sensitivity to the distinction between ontology and epistemology; between what might exist, what emerges and what we experience (Sayer, 2000:11). This perspective argued for a retention of the idea that 'reality' exists outside human social (and discursive) construction, that it has effects of constraining the scope for and conditions of social construction, and that we should be cautious in assuming causal relations between language and social reality.

This opposition of social constructivism to realism, however, seems somewhat overstated. A critical realist perspective, for example, while arguing for a stratified ontology which acknowledges an extra-discursive 'real world' in which objects (including people) have latent causal powers, still argues strongly that 'the world can only be known in terms of available descriptions, or discourses' (Sayer, 2000, p47). On an epistemological basis, then, (weak) social constructivist and critical realist viewpoints can be seen as compatible. If effects are judged in terms of 'meaning', of how we make sense of the world, then both social constructivists and critical realists would concur on the potential constitutive effects of language as particularly important when we are discussing such socially and culturally embedded sets of practices as 'childhood' or 'technology'. This is not to argue that either childhood or technology as such do not exist, nor that they do not have latent potentials, but that the way in which their potentials are realised is through social and discursive formations.

If we consider the discourses of 'change' in the previous chapter, for example, we see accounts in which various 'latent' potentials of both technology and childhood

are made visible: for reshaping social relations, for creating new forms of identity as 'cyborgs', for underpinning new working practices and global businesses. That these potentials are latent, however, does not determine the ways in which they will be realised in social life. Instead, this realisation is achieved in a dialectical relationship between the potentials identified and the discourses we build around them, the potential and the discourse need to be articulated together in order to create a new social formation.

'Articulation', can be considered a concept which fruitfully allows us to examine the ways in which these different elements of the social are linked together in discourse. It is in this way that Chouliaraki and Fairclough conceive of articulation as a theoretical device for examining social relations through Critical Discourse Analysis

The concept of 'articulation' which we take from Laclau and Mouffe, is helpful in describing the bringing together of elements of the social as moments of a practice, and the relations of internalisation between them. Articulation implies the view of elements of the social as first, in shifting relationships with each other, though capable of being stabilised into more or less relative permanences as they are articulated together as moments within practices; and as second, transformed in the process of being brought into new combinations with each other. The concept of articulation can also be extended down into the internal structure of each particular moment to specify the particular, local form it takes in a particular practices. (Chouliaraki and Fairclough, 1999:21)

The concept of 'articulation', moreover, is useful in discourse analysis in that it foregrounds the material and reflexive processes of the production of links between social elements; articulations are both 'ways of linking' and 'ways of speaking/representing' new configurations of elements in the world (Slack, 1996).

Articulation

implies that all elements of the social (non-discursive and discursive) continuously enter into shifting relationships with each other, with discourse playing the key role of constituting these relationships in meaning (Chouliaraki and Fairclough, 1999:105)

The significant insight of Laclau and Mouffe, however, is to foreground the ways in which this articulatory process not only links together different elements of the social, but also serves to create relations of equivalence and difference between them, relations which can come to serve, under some circumstances, as means of

maintaining power relations in society by inflecting relations of difference with relations of dominance and subordination.

3.3 Hegemony (and ideology)

If articulation is understood as a process of creating links between and unities of different elements, 'ideology' can be understood as a process of creating links and unities of different elements which seem 'natural' and 'commonsensical' rather than contingent and historical. While the articulations of 'Technology' with economic change or 'Child' with schooling can be understood as having 'no necessary correspondence' they can, however, be understood as 'ideologies' in that they have rendered their historically specific articulation as simply an 'assumption', or a 'normal' way of doing things. In such a way, by becoming 'commonsense', they become resources on which to draw in the course of everyday interactions – they are not foregrounded as sites for contestation, but as natural and inevitable links. Effectively, these articulations can be understood as 'ideological' in the sense that they hide the 'ideologies' (belief systems about the world) which underpin them (Fairclough, 1989/2001: 71-87). In Laclau and Mouffe's conception of articulation, they describe these ideological articulations as 'nodal points' (drawing on Lacan's concept of *points de capiton*). Nodal points, they argue, function as sites in which the infinite play of meaning are both closed down and come to be used as commonsense resources on which people draw in their understandings of the 'natural order' of social relations. While the term is far from fully explained in their analysis, the following example provides a route in to understanding the concept of 'nodal points':

What is important is to try to show how 'Man' has been produced in modern times, how the 'human' subject – that is, the bearer of human identity without distinctions – appears in certain religious discourses, is embodied in juridical practices and is diversely constructed in other spheres. An understanding of this dispersion can help us to grasp the fragility of 'humanist' values themselves, the possibility of their perversion through equivalential articulation with other values, and their restriction to certain categories of the population – the property owning class, for example, or the male population. Far from considering that 'Man' has the status of an essence – presumably a gift from heaven – such an analysis can show us the historical conditions of its emergence and the reasons for its current vulnerability, thus enabling us to struggle more efficiently, and without illusions, in defence of humanist values. But it is equally evident that the analysis cannot simply remain at the moment of dispersion, given that 'human identity' involves not merely an ensemble of diverse positions but also

forms of overdetermination existing among them. 'Man' is a fundamental nodal point from which it has been possible to proceed, since the eighteenth century, to the 'humanisation' of a number of social practices. (Laclau and Mouffe, 1985/2001:116)

The creation of 'nodal points' in commonsense ideological articulations is central to a 'hegemonic' approach to the theorisation of power relations. Hegemony as a concept originated in the first instance as an attempted resolution to a specific problem in Marxist theorising – namely, how to explain the processes by which different classes in society could be brought together to achieve revolution when the working classes were not aware of their own interests, and when revolution could only be achieved by the mobilisation of other classes in society as well as the working classes. For Leninism, the concept of hegemony emerged as a form of 'political leadership' within a 'class alliance'. In this conception, a 'vanguard group' would come to act as leaders for a wider range of different classes by representing their interests as collective. In this concept, representations of interests were clearly distinguished from the groups representing these interests, and differences between groups/classes was maintained in the concept of a 'staged' revolution – in other words, one which had to pass through different stages before the 'true' nature of the working classes would come to achieve universality. (Laclau and Mouffe: 1985/2001)

This conception, however, was developed in a different direction in Gramsci's formulation of what Laclau and Mouffe have called 'democratic hegemony'. In this conception, the boundaries between the actions undertaken and ideas represented by different classes, and between the classes themselves, were understood to be eroded by the practice of hegemony. Rather than offering a view of hegemonic practice as a militaristic form of contingent 'alliance', Gramsci offered a view of hegemony as a moral and value-laden practice which transformed the groups involved. Hegemony became viewed as the construction of shared interests and, in this process, the transformation of the very identity of the social agents allied together, rather than 'a rationalist coincidence of 'interests' among preconstituted agents' (Laclau and Mouffe: 1985/2001:58; Gramsci, 1971/1987: 58-59).

The means by which hegemony could be achieved in this concept, was through the creation of shared values and interests amongst these groups, by constructing

'common sense' (shared understandings of interests) out of a diverse ensemble of interests, beliefs and practices (Slack, 1996:117). This analysis also widens the 'scope' of hegemony from a description of a specific revolutionary practice to a 'process by which a hegemonic class articulates (co-ordinates) the interests of social groups such that those groups actively 'consent' to their subordinated status' (Slack, 1996:117; Gramsci, 1971/1987:59). As such, hegemony can be used to explain why people agree to their subordination seemingly against their better interests, and offers an account of social power as existing in the ideological domain as well as through the exercise of force. In other words, by co-ordinating the 'beliefs' and 'ideas' of social groups through commonsense articulations, it is possible for them to consent to the will of other social groups. This creation of 'commonsense' beliefs uniting different groups was understood by Laclau and Mouffe not as a form of 'class leadership', but as the creation of relations of equivalence between potentially contradictory social elements. As Laclau (1985) argues:

A class is hegemonic not so much to the extent that it is able to impose a uniform conception of the world on the rest of society, but to the extent that it can articulate different visions of the world in such a way that their potential antagonism is neutralised (Laclau, quoted in Slack 1996, p116)

This conception of 'common sense' articulations created over difference, however, raises the possibility that such elements might be separated, or linked differently, as Chouliaraki and Fairclough argue, articulation is only a 'relative permanency':

This conceptualisation also highlights the inherent possibility of de-articulation and rearticulation. Hegemony is a bid for closure of practices and networks of practices which is destined to fail to a greater or lesser extent because the social is by its nature open. (Chouliaraki and Fairclough, 1999:25)

This instability therefore foregrounds hegemonic articulations as sites of tension between different groups' attempts to 'fix' the meaning (and hence social implications) of different articulations. As Hall argues:

Late modern societies [...] are characterised by 'difference', they are cut through by different social divisions and social antagonisms which produce a variety of different 'subject positions' – i.e. identities – for individuals. If such societies are held together at all, it is not because they are unified, but because their different elements and identities can, under certain circumstances, be articulated together. But this articulation is always partial: the structure of identity remains open. (Hall, 2000, 185)

The process of articulation and de-articulation, of the attempt to render articulations 'natural' and 'commonsensical' and hence to widen their appropriation from a relevance to one social group to an underpinning assumption of multiple social groups, constructs the articulatory process as profoundly political and as a site for struggle. It is in this way that Laclau and Mouffe make a key distinction between articulatory processes that are ongoing elements of meaning making in language and *hegemonic* articulation, which is seen as having a fundamentally political character, in that it is understood as an *interested* process which attempts to create 'unities' from potentially contradictory elements. The goal of hegemonic articulation is understood as being one which attempts to create articulations between groups/concepts which might otherwise be conceived as contradictory or antagonistic.

These multiple understandings are used as a basis for the analysis of relations of power in society by Laclau and Mouffe. To briefly summarise their argument: Laclau and Mouffe identify a series of conditions in which political struggles over meaning (and hence social structure) take place. First, they draw on Gramsci's notion of an 'organic crisis' as

A conjuncture where there is a generalised weakening of the relational system defining the identities of a given social or political space, and where, as a result, there is a proliferation of floating elements (1985/2001: 136; Gramsci, 1971/1987: 210-218)

In this context, they argue that 'historical blocs' form which are relatively unified through 'nodal points' which fix the meaning of particular concepts (an example is the 'Declaration on the Rights of Man'). The process by which these blocs are constituted is understood to be through regularised patterns of diffusion of the assumptions embedded within these 'nodal points' into multiple discourses, institutions and practices. The 'discursive formation' therefore constructs the 'historical bloc'¹⁵. They argue that the constitution of these historical blocs, when formed in times of antagonism between different social groups, can be viewed as

¹⁵ This is a decisive break from Marxist accounts of social power, which privileged a pre-existing economic class as mobilising 'ideology'. Instead, in this formation, it is the articulatory process of forming a hegemonic formation which constitutes the 'historical bloc' itself.

‘hegemonic formations’, in that they can be understood as an attempt to articulate different elements of the discursive to one social bloc or another.

The two conditions of a hegemonic articulation are the presence of antagonistic forces and the instability of the frontiers which separate them. Only the presence of a vast area of floating elements and the possibility of their articulation to opposite camps – which implies a constant redefinition of the latter – is what constitutes the terrain permitting us to define a practice as hegemonic. (Laclau and Mouffe, 1985/2001:136)

This formulation was an attempt to challenge the idea that power emanated automatically from certain classes of society *and* at the same time, to challenge the concept of the ‘ideological’ as a separate and distinguishable space in social formations distinguished from material practices. Essentially, it was an attempt to critique longstanding Marxist analyses of society. Instead, they argued

it is evidently not possible to maintain the idea of the singleness of the nodal hegemonic point. Hegemony is, quite simply, a political type of relation, a form, if one so wishes, of politics; but not a determinable location within a topography of the social. In a given social formation, there can be a variety of hegemonic nodal points. (Laclau and Mouffe, 1985/2001:139)

Rather than conceiving the ideological project as wholly determined by economic relations, this concept highlights multiple ideological projects and struggles – for example, the attempt to redefine ‘Woman’ in feminist struggles, or to disarticulate particular concepts of ‘race’ in post-colonial analyses. The intellectual project Laclau and Mouffe therefore envisage is one of constructing new hegemonic nodal points around which alternative articulations can emerge, specifically, they argue for the creation of new concepts that might enable equivalences to be established between these multiple struggles as a means of generating a new post Marxist social and political formation¹⁶. They are concerned specifically with maintaining the Leninist and Gramscian concept of hegemony as a means of mobilising social change.

¹⁶ No hegemonic project can be based exclusively on a democratic logic, but must also consist of a set of proposals for the positive organisation of the social. If the demands of a subordinated group are presented purely as negative demands subversive of a certain order, without being linked to any viable project for the reconstruction of specific areas of society, their capacity to act hegemonically will be excluded from the outset. This is the difference between what might be called a ‘strategy of opposition’ and a ‘strategy of construction of a new order’. (Laclau and Mouffe, 1985/2001:189)

3.4 Recontextualisation

3.4.1 *The historical conditions of articulatory practices*

In avoiding privileging one social group over another as the potential determining force in the construction of hegemonic formations, and in emphasising the 'openness' of the articulatory process, however, Laclau and Mouffe are accused of conceiving of new articulatory processes as potentially emerging in a vacuum, in which social agents are all free and equally well placed to construct new articulatory practices as if from scratch.

The basic problem with [the concept of nodal points] is that it is unable to explain which social forces have greater capacity to effect articulatory change and why. We need a concept of structure not as provisional but as relative permanence – open to change but with relative stability. (Chouliaraki and Fairclough, 1999:125)

This critique takes as its premise a critical realist account of social life (Sayer, 2000; Bhaskar, 1975; 1998) which argues that, while social formations can be understood as socially constructed by human actors, once constructed they produce an asymmetry in relations between the individual and the social world, as 'the social world is always prestructured and agents are always acting in a world of structural constraints and possibilities that they did not produce' (Patramanis, 2000). As Sayer argues:

Social structures and practices are concept dependent, but they are usually most dependent on concepts of actors in the past, not today (Sayer, 2000:35)

This sense of a pre-existing, albeit historically and socially contingent set of social relations leads Fairclough to argue that there are necessarily limits on the extent to which human actors can reshape their social contexts through articulatory practices:

...although aspects of the social world such as social institutions are ultimately socially constructed, once constructed they are realities that affect and limit the textual (or discursive) construction of the social...we may textually construe (represent, imagine etc) the social world in particular ways, but whether our representations or construals have the effect of changing its construction depends on various contextual factors, including the way social reality already is, who is construing it, and so forth (Fairclough 2004: 230)

This analysis is based not only upon a particular understanding of social relations as constituted in relatively stable social structures, but also draws upon an understanding of the articulatory process as emerging in and through historical contexts and references embedded in language. This understanding draws on Bakhtin's concept of communicative practices as 'dialogical'. In this concept articulations are understood as always responding to, always anticipating and eliciting responses with other acts of communication (Fairclough, 2003). This notion locates speech and social interactions through language, not solely within individuals, but within the wider linguistic resources of the historical period. As such, this concept locates articulation as a process of linking with previous historical articulations, and so with wider pre-existing social structures and power relations. A key concept in Fairclough's theorising of this process is the concept of interdiscursivity, understood as the means by which a 'text inserts itself into history':

Kristeva (1986a, 39) observes that intertextuality implies the 'insertion of history (society) into a text and of this text into history'. By 'the insertion of history into a text' she means that the text absorbs and is built out of texts from the past (texts being the major artefacts that constitute history). By 'the insertion of the text into history' she means that the text responds to, reaccentuates, and reworks past texts, and in so doing helps to make history and contributes to wider processes of change, as well as anticipating and trying to shape subsequent texts. This inherent historicity of texts enables them to take on the major roles they have in contemporary society at the leading edge of social and cultural change. (Fairclough, 1992, P102)

This is expanded further in Sayer and Hall's critique of the 'excesses' of 'necessary non-correspondence' which can be understood as the 'excesses' of thinking of the elements in articulated structures as being potentially 'articulated with anything'.

Consider an example, such as a discourse on health services, including terms such as 'hospitals', 'doctors' [...]. Each of these terms is arbitrarily related to particular referents in that the latter could always be called something else. However, this does not mean that the relationship between their referents is arbitrary, or that the relationship between the signifieds within such discourse are arbitrary, so that the relationship between 'doctors' and 'patients' is equivalent to that between 'doctors' and 'horse-jumping'. (Sayers, 2000, p38)

Hall, similarly, argues that articulatory processes are implicated in wider socio-historical formations and practices, embedded in the 'grooves' of social relations.

For example, he offers an analysis of the articulations of Religion with particular socio-historical formations:

Religion has no necessary political connotation. [...] it has no necessary, intrinsic, transhistorical belongingness. Its meaning – political and ideological – comes precisely from its position within a formation. It comes with what else it is articulated to. Since those articulations are not inevitable, not necessary, they can potentially be transformed, so that religion can be articulated in more than one way. I insist that historically, it has been inserted into particular cultures in a particular way over a long period of time, and this constitutes the magnetic lines of tendency which are very difficult to disrupt[...] Of course, if you are going to try to break, contest or interrupt some of these tendential historical connections, you have to know when you are moving against the grain of historical formations. If you want to move religion, to re-articulate it in another way, you are going to come across all the grooves that have articulated it already. (Hall in Grossberg, 1996:142-3)

Importantly, in Hall and Fairclough's arguments, this inherent 'historicity' of articulations leads them to argue that we need to pay attention to sites which are specifically concerned with the production of discourses and representations of the world – particularly sites such as the media and the political spheres. While challenging the underpinning determinism of Althusser's concept of 'ideological state apparatuses' as being tied in necessary and predetermined ways to particular economically determined social classes¹⁷, Fairclough and Hall still retain a concern for analysing how these specific sites of 'discourse work' function to create common-sense understandings of the world in the service of particular dominant groups. Hall, for example, argues that we need to understand the way in which the domains of communication

at a certain moment, yield intelligible meanings, enter the circuits of culture – the field of cultural practices – that shape the understandings and conceptions of the world of men and women in their ordinary everyday social calculations, construct them as potential social subjects and have the effect of organising the ways in which they come to or form consciousness of the world (Hall, 1989:49)

That the social world is 'prestructured' for social actors, that it is embedded in historical contexts, is the basis for Chouliaraki and Fairclough's critique of Laclau and Mouffe, as this prestructuring, they argue, positions some social actors and as

¹⁷ While this Althusserian concept of 'ideology' as necessarily linked with economically dominant classes is still dominant in Fairclough's 1989 'Language and Power', his work with Chouliaraki and use of Laclau and Mouffe's concept of articulation, has destabilised this assumption in his work by the late 1990s.

better positioned to effect hegemonic change than others. In this account they privilege attention, therefore, to the analysis of the production of 'commonsense' by actors in political and media fields.

3.4.2 *Social fields and orders of discourse*

Hall's analysis of 'media messages' in communication fields, also serves to open up another important aspect of social structures in constructing 'fields' or 'orders' of discourse¹⁸. Where previously, analyses of the ideological functions of the media had, in the main, assumed a dominant and determining relationship between the message and the audience, an approach usually characterised by the term the 'hypodermic needle approach', in his essay 'encoding/decoding' Hall problematised this relationship by conceiving of 'articulated' relationships between production, message and audience (Hall, 1980). While producers of texts may attempt to privilege a particular interpretation of the world, there was understood to be no necessary correspondence between this interpretation and the ways in which audiences would make sense of it. Instead, audiences were understood to adopt different positions towards potential messages; that is, their interpretation was shaped by their positions in pre-existing (albeit contingent) social groups.

Hall conceived of three groups of positions that might be adopted to shape the success of the 'articulation' between 'producer' and 'audience' through 'message': the first, a 'dominant' position, assumed a shared set of values that would mean that the audience would interpret the message in a way coterminous with the desires of the producers; a 'negotiated' position would mean that the audience would accept certain underlying concepts in the message, but challenge other, often specific and localised, elements; an 'oppositional' position, would mean that the audience would reject all forms of the message and read it with reference to a completely different conception of the world. For example, messages on 'union strikes' with a dominant reading of social disorder would be read in an oppositional reading as examples of 'class oppression' (Hall, 1980). Hall's proposal that social change could be effected at times of increasing numbers of oppositional readings,

¹⁸ This is not to suggest that the concept of social 'fields' originates with Hall, but to highlight the ways in which his analysis of communication processes foregrounds and demonstrates the need for a more nuanced understanding of the movements of 'discourse' which takes account of the different social and cultural formations in which both discourse 'producers' and 'consumers' might operate.

which have reference to a 'commonsense' understanding of the world which differed from the dominant view has similarities with (and predates) Laclau and Mouffe's conception of a hegemonic project as one which attempts to construct alliances around new 'nodal points'. What these accounts propose is that the success of articulations is dependent upon constructions of 'commonsense' which differ between different social groups, and that different 'commonsense' assumptions about the world (different 'nodal points' of reference) can lead to challenges to dominant articulatory practices.

This concept of social actors being positioned in different 'fields' of interpretation¹⁹ relates both to Laclau and Mouffe's concept of 'discursive formation' (drawing on Foucault) and to field analysis in Bourdieu and Bernstein. It generates a sensitivity not only to how articulation works in micro and macro interactions, but also to:

questions of social space, the division of social territory into fields (in Bourdieu's terminology) and the subject positions and forms of consciousness set up through that division. [to] questions of classification, with degrees of insulation between social practices (fields) and social subjects (and so habituses), with 'what can go with what', seen as effects of power which impose arbitrary divisions through symbolic violence. (Chouliaraki and Fairclough, 1999:106-7)

We could, therefore, conceive of social life as being organised into distinct but inter-related fields. These fields come to be understood as operating with relatively stabilised 'interpretive rules' which attempt to manage and limit how concepts are articulated in these spaces. These fields could be understood as operating both with distinct concepts of 'common sense', and as exercising specific rules to govern the ways in which new ideas are accommodated within them. The term 'recontextualisation' (drawing on Bernstein) has come to be used to explain the principles which govern the limits of articulatory 'freedom' in different fields. Central to this concept is the idea that fields actively work to limit and transform the articulations across different fields

¹⁹ This approach was prevalent at the time. Stanley Fish's concept of 'interpretive communities' offered a deconstructive critique of the canon of Anglo-American literature by demonstrating the ways in which 'readings' of the text were structured around different social groupings. This concept was taken to its extreme in Barthe's idea of the 'death of the author', and in Derrida's 'deconstructionism' which paved the way for the postmodernist tendency to reduce social life to the infinite play of signifiers. The concept of 'interpretive communities', however, as Hall and others have shown (see Ang 1992; Hobson, 1982) does not automatically lead to the conclusion that there are no forms of social order.

When a text is appropriated by recontextualising agents, operating in positions of this field, the text usually undergoes a transformation prior to its relocation. The form of this transformation is regulated by a principle of decontextualising. This process refers to the change in the text as it is first delocated and then relocated. This process ensures that the text is no longer the same text [...] The decontextualising principle regulates the new ideological positioning of the text in its process of relocation in one or more of the levels of the field of reproduction. (Bernstein, 1990:60-61)

Moreover, as fields are understood as relating to the wider historical formations of social life, this process of recontextualisation is seen not as neutral, but as a means of establishing principles of classification between different social orders

Insulations [between classifications] are intervals, breaks, delocations which establish categories of similarity and difference: the equal and the unequal; punctuations written by power relations that establish as the order of things distinct subjects through distinct voices [...] the insulation attempts to suppress the arbitrariness of the principle of classification by suppressing the contradictions and dilemmas that inhere in the very principle of classification. We can see that power relations can accomplish their reproduction by establishing a principle of classification that suppresses its own contradictions and dilemmas through the insulation it creates, maintains and legitimates (Bernstein, 1990:25)

Centrally, the concept of recontextualisation offers a principle for examining the ways in which historical social formations come to act as hegemonic forces in maintaining or challenging specific articulations of concepts in different contexts.

the question of power is always at issue, as also is the question of hybridity – the movement of a discourse or genre from one practice into another entails its recontextualisation within the latter, i.e. a new articulation of elements into which it is incorporated, a new hybridity. (Chouliaraki and Fairclough, 1999:93-94)

3.5 Colonisation/appropriation

Importantly, however, the concept of 'recontextualisation' has built into it the potential for change. Where principles may govern how different articulations are produced in different fields, the very fact that different elements are being brought together opens up the potential for change. As new 'things/people/discourses' are introduced in different settings, so they open up the potential for these settings to be transformed and for new articulations to emerge. As Fairclough argues:

Recontextualising the new discourse is both opening an organisation (and its individual members) up to a process of colonisation (and its individual effects) and, insofar as the new discourse is transformed, in locally specific ways by being worked into a distinctive relation with other (existing) discourses – a process of appropriation' (Fairclough, 2004:232)

The recontextualising principles of specific social fields, then, cannot be understood as wholly determining articulatory practices. Where, then, do articulatory changes happen? In wanting to avoid the structural determinism of some accounts of social fields (see for example Foucault and Bernstein) without presenting articulatory change as wholly the preserve of individual social actors, Fairclough proposes a concept of 'Social Practices' as mediating sites between the individual and the structural:

By practices we mean habitualised ways, tied to particular times and places, in which people apply resources (material or symbolic) to act together in the world [...] they constitute a point of connection between abstract structures and their mechanisms, and concrete events – between 'society' and people living their lives. (Fairclough, 2004:21)

Viewing social orders as made up not of monolithic reproductions of dominant opinions, nor as the random actions of individuals, opens up an analysis of social change as a dialectical relationship in which social events, networked in social practices and embedded in social fields, can function as sites of colonisation and appropriation for new ideas or articulatory practices. Social practices can be understood as the battleground in which the processes of hegemonic articulation are fought out – in the everyday, in the repeated and the familiarised, and in the ways in which individuals negotiate multiple social practices and social formations in each interaction. It is in the relative stabilisation and normalisation of certain social practices, and their recontextualising rules, across diverse social orders, that hegemonic articulation achieves its closure which is, however, always and only partial.

3.6 Moving forward

What I am concerned with in this analysis is how particular ideas of childhood may have been transformed in the political, media and family discourses of the late 1990s and with the ways in which these ideas of childhood may have created consent for reconfigurations of social practices.

I want now to review the preceding discussion of the relationship between language and society in the light of these concerns in order to provide a statement of the theoretical assumptions underpinning the analysis in this thesis.

In the first instance, this discussion has foregrounded the extent to which terms such as 'childhood' function as classificatory devices rather than direct translations of an externally existing reality 'into word'. While an external reality of 'child' or 'technology' may exist, and may be characterised as having 'potentials' which can limit their discursive construction, the ways in which these potentials are realised and stabilised as 'natural' is understood as being in and through the discursive realm.

The concept of 'articulation' suggests, moreover, that the act of representation is an active and ongoing process of combining together in words and concepts (henceforth, after Fairclough, called 'discourses'²⁰) a whole range of different potential connotative meanings and, moreover, of distinguishing these from a range of other possible meanings. The discourses of 'childhood' and 'technology' from this perspective can be understood as articulations which create relations of equivalence and difference between concepts, and between the people and practices which come to be associated with these concepts. Discourses of childhood could be considered in Fairclough's terms, as 'ideological articulations', in that historically 'childhood' has come to be understood as being 'naturally' articulated with a range of social practices, institutions and discourses. If I am interested in understanding whether discourses of childhood are changing in the context of the information society, I would, then, need to examine how 'childhood' is being articulated together with different concepts, institutions and practices at different times and to explore what relations of equivalence and difference are being established in this discursive work.

The second element from this analysis is the concept of the discursive as a realm of social struggle, in which the production and maintenance of specific articulations is

²⁰ Fairclough provides a specific meaning for 'discourse' as 'representations or ideas of the world', rather than the more general use of 'discourse' as either 'language' or the linguistic function of social power from linguistics or Foucauldian analysis.

understood as central in 'creating consent' for social and political formations. 'Ideologies' of childhood could then, be considered as means of organising relations of childhood and as contested sites in which different social actors attempt to articulate and de-articulate particular connotations of childhood. The goal of this struggle is understood to be the achievement of social dominance through having connotations accepted as common sense and used as a resource for a wide range of social actors, institutions and practices to draw upon.

The third focus in this analysis is on the factors which inform such hegemonic struggle. While Laclau and Mouffe provided a critique of economically determinist accounts which ultimately explained all forms of hegemony as achieved in the service of a pre-defined economic class, the historical analyses of Hall, Fairclough, Sayer, Bourdieu and others have served to emphasise that social actors are positioned differently in their ability to effect hegemonic change. While conceiving of social structures as ultimately socially constructed, they nonetheless provide the conditions within which social actors can act.

As such, in attempting to understand how discourses of childhood might be changing, we need to understand the specific roles played by fields, such as the media and policy fields, which are dominant within and dedicated to the reproduction of discourse in society. This sensitivity to social fields, also requires an attention to the ways in which discourses are changed and transformed, 'recontextualised' as they move across different sites, a process which also opens them, and the fields of which they are a part, to 'colonisation' and 'appropriation'. When we are concerned with representations of children's interactions with digital technologies, representations which occur across a range of settings from the family sphere to the international political stage, the concept of recontextualisation would ask us to consider how such articulations of children/technology are transformed in different settings, and to explore the principles which govern these transformations.

We could, therefore, conceive of the 'dominant framework' of childhood discussed in the previous chapter, as an 'ideological articulation' which has served to produce particular relations of equivalence and difference amongst adults and children. It is

an articulation which serves to produce assumptions of universality and inevitability across the diverse and contested lived experiences of different children. It is an articulation regularly dispersed across diverse social institutions, practices and rituals (from schools, to christening and graduation ceremonies, to a first drink), and which serves to produce unequal relations of power between adults and children. In this formulation 'Childhood' comes to act as a commonsense idea for organising relationships between diverse social groupings within this discursive formation. This is not a new argument, and others have, of course, argued that discourses of childhood function as *ideologies* of childhood:

that is, a set of meanings which serve to rationalise, to sustain or to challenge existing relationships of power between adults and children, and indeed between adults themselves
(Buckingham, 2000:11)

The question I might want to ask in this thesis, however, is whether, in the late 1990s, we were witnessing a weakening in the relational systems which maintain this 'ideology of childhood'; whether we were witnessing the emergence of an organic crisis that would create new antagonisms and new hegemonic formations which would attempt to create new 'ideologies of childhood'. Laclau and Mouffe's condition for initiating such change would be the construction of new nodal points around which such hegemonic formations could emerge²¹. It is possible that the UN Convention on the Rights of the Child might be considered one such 'nodal point', in that it attempts to universalise and normalise particular understandings of children's rights. At the same time, however, this convention could also be understood to reinforce the 'dominant framework' of childhood – if children were understood as equal to adults, as having the same rights as citizens, why would they need a separate convention above and beyond the universal declaration of human rights?

What I am interested in in this thesis, is whether the universalising discourses of the 'digital child' might act as a more radically destabilising 'nodal point' in weakening relational systems between adults and children, whether competing 'commonsense' understandings of childhood might emerge which create consent

²¹ See Laclau and Mouffe 1985/2001:159-163. The key condition for a shift from relations of 'difference' to relations of struggle is understood as being 'the existence of an external discourse which impedes the stabilisation of subordination as difference' (159)

for changes in educational and family practices; whether new 'elements of the social', such as digital technologies, came to act as 'floating elements' which could be articulated with different hegemonic blocs. At the same time, if we consider any shift in articulatory practices as creating new relations of equivalence and difference between concepts and between the social groups associated with them, and if we understand hegemonic struggles as multiple, I need also to ask whether any new configuration of childhood emerging in this period might establish new antagonisms 'within' childhood, new relations of subordination between social groups that cross-cut the divisions of adulthood and childhood. Essentially, I need to ask whether new universalising discourses of childhood in the information age, serve to obscure differences in childhood experiences structured through other social struggles, from class, through gender to ethnicity.

4 Methodology

4.1 Introduction: the CDA framework

This chapter builds on the previous theoretical discussions by providing an outline of how the concepts of articulation, hegemony, recontextualisation and appropriation/colonisation are to be practically operationalised in a research methodology within the framework of Critical Discourse Analysis (CDA). First, however, it provides an outline of my own orientation to the research and the route by which I came to focus on this topic. The chapter then goes on to discuss the reasons why the specific historical focus of the analysis was decided upon, the ways in which texts were selected and the approach to textual analysis that was adopted. It also discusses the ethical issues considered in the research. Specifically, the chapter provides an outline of how the techniques of textual analysis combine with the theoretical considerations of the previous chapter to address the research questions outlined in Chapter 1. Before explaining my own orientation to the research, and the reasons for the selection of the specific historical period under consideration, however, it is worth outlining the key 'stages' of the CDA method proposed by Chouliaraki and Fairclough in 1999. This method, they acknowledge, is made up of a complex series of steps not all of which need to be adopted for all studies, indeed as Chouliaraki and Fairclough admit:

The framework is rather a complex one, and for certain purposes analysts might focus on some parts of it rather than others [...] the framework can be slimmed down in various ways for various purposes. (Chouliaraki and Fairclough, 1999:59)

I propose to include all steps in the overall method but to 'slim down' the full arsenal of tools that CDA offers for textual analysis to those most likely to elicit an understanding of the processes by which articulations of childhood/technology are being produced in the texts and practices of late modernity²². The following, however, provides an overall outline of the CDA method as initially outlined by Chouliaraki and Fairclough in 1999, modelled on Bhaskar's 'explanatory critique'.

²² Fairclough (2003:191-195) provides an exhaustive checklist for textual analysis which would, if adopted in this study, lead to the need to focus in on such a limited number of texts that the goal of examining the wider questions of social change with which this thesis is concerned would be rendered impossible.

1. *A problem (activity, reflexivity)*
 2. *Obstacles to its being tackled:*
 - a. *Analysis of the conjuncture*
 - b. *Analysis of the practice re its discourse moment:*
 - i. *Relevant practice(s)?*
 - ii. *Relation of discourse to other moments?*
 1. *discourse as part of the activity*
 2. *discourse and reflexivity*
 - c. *Analysis of the discourse:*
 - i. *Structural analysis: the order of discourse*
 - ii. *Interactional analysis*
 1. *interdiscursive analysis*
 2. *linguistic and semiotic analysis*
 3. *Function of the problem in the practice*
 4. *Possible ways past the obstacles*
 5. *Reflection on the analysis*
- (Chouliaraki and Fairclough, 1999:60)

Rather than working through each of these steps in sequence in this chapter, I will cover all of these questions through an account of the problem identified, the conjuncture for analysis, the processes of selection of the focus for study and methods used in the analysis of the texts (the previous two chapters have provided an outline of my take on the relationship of discourse to 'childhood' (2b above)). To begin, however, I want explain my own 'standpoint' to the research, following Bhaskar's dictum that critical social research should involve 'a reflexive understanding of the historical and social positioning of the researcher's own activity' (Chouliaraki and Fairclough, 1999:35)

4.2 Critical and reflexive

In my understanding, two 'dispositions' structure the approach to discourse analysis defined by Fairclough as 'Critical Discourse Analysis'. Rather than considering these as methodological approaches to the research, they reflect, more accurately, the political and personal orientation of the researcher to the subject under analysis and can be described as consisting of the adoption of a 'critical' and 'reflexive' approach. *Critical*, in that the research is approached with a goal of tackling perceived 'discursive' problems with the aim of achieving 'epistemic gain' (a movement from a problematic position to a more adequate one within a field of

available alternatives (Calhoun, 1995). It is a position which assumes (based on the ontological and epistemological frameworks of the previous chapter) that 'the world doesn't have to be the way it is now', it can be different, and that a key tool in achieving this is the process of exploring how social formations come to be understood as 'natural' in the first place. *Reflexive*, in that the researcher is understood to be 'present' in the research, to themselves be active in and *interested* (in the sense of having specific goals) in the process and, thus, must make his/her own perspective, goals and position clear from the outset.

It is therefore probably appropriate for me to explain exactly how it is that I come to find myself carrying out this research; after all, no one would suggest that reading all of Tony Blair's speeches from 1997-2001 was done solely in the spirit of disinterested scientific enquiry or 'for fun'; there are, after all, other subjects that could form the basis of a thesis.

In the first instance, my interest in the potential emergence of new ideas of childhood stems from my involvement in the ScreenPlay project as a researcher from 1998 to 2001. This project was generated in response to the ESRC's call for proposals for the Children 5-16 research programme, although not successful in this call it was resubmitted and accepted in responsive mode²³. The project emerged in response to Green & Bigum's (1993) paper 'aliens in the classroom' which argued that we were witnessing the emergence of radically different young people from the generations who had preceded them. The research was positioned as an attempt to engage with the 'lived experiences' of young people in opposition to the more generalised theoretical conjectures about the intersection between young people and digital media of the time. Indeed, it took a 'sceptical' stance in relation to these discourses, and argued that through detailed empirical research, it would be possible to achieve a more informed picture of young people's use of computers in the home:

²³ I was not researcher on the project at the time of the production of the research proposal, and was not therefore, involved in the initial formulation of the research design or problematic. After I was appointed as researcher on the project, however, I had the principal responsibility for designing research instruments and conducting data collection and shared responsibility for writing up the research in journal papers and in the final book. My relationship with the project was one of working within and reshaping a pre-existing formulation of research questions and methods, and so, as for many contract researchers, it involved a retrospective engagement with and opportunity to shape the issues raised in the research design, rather than a full 'ownership' of the underlying philosophies of the project.

In the first place we were sceptical of the empirical basis of many of the claims being made in the mid 1990s. Much of the writing was self-avowedly speculative rather than based on empirical research. And those empirical studies that did exist were, for the most part based on relatively flimsy evidence, where there was a tendency for researchers to focus on the 'exotic' activities of a small number of young people rather than look at the commonplace activities of a broad cross-section of the population. (Facer et al, 2003, p224)

This research focused on three key questions throughout the three years of data collection and analysis:

*is there a 'digital divide' and if so what form does it take, and is it important in children's lives?;
is there a new 'digital generation' and if so, what does it look like?;
is there 'digital learning' and if so, in what ways is it different from other forms of learning? (Facer et al, 2003 p226)*

The research sought to take an avowedly multi-disciplinary perspective, bringing together researchers from sociology of education, media and cultural studies and psychology of education in response to what was seen as a set of research problems that required expertise from these domains. The extent to which the research processes enabled full theoretical engagement between these disciplines remains under some doubt (Facer et al, 2003: chapter 8) although these different perspectives clearly contributed to a richer and more complex picture of children's interactions with technologies in the home than might otherwise have been the case.

Aside from the fact that this project offers a rich source of ethnographic data offering contemporaneous accounts by parents and children of their experiences of owning and using computers in the late 1990s, a key reason for revisiting this project in this thesis is that its findings, and I myself, became implicated in the wider social debates around the 'construction of childhood in the digital age'. As a direct result of my involvement in this project, for example, I have written newspaper articles on children and technology, have presented to industry, practitioner and academic groups on children and technology, and am now research director of a charity which focuses specifically on the 'future visioning' of new approaches to education in the age of 'the digital generation'. In this role, I work with technology companies and government departments, contribute to the

formulation of policy documents and research programmes and create digital tools and curricular materials to support children as learners in schools and homes. Arguably, I have become embedded in the '*proliferation of interpretative struggles over the nature, capacities, and likely effects of each new technological application*' in relation to children today (Knights et al, 2002), and in their 'materialisation' in practices and technologies in schools and homes.

What I am interested in, therefore, is understanding more precisely exactly what 'interpretative struggles' I have got myself into. This involves a number of personal and political considerations – to what extent can I consider the goals of my organisation (Futurelab) in which I/we place particular emphasis on *children* as our primary concern, as actually complicit in a wider hegemonic struggle which has very different goals, goals which may be determined more by a concern for the profits of technology companies than the needs of children? From a strategic perspective I want to understand the extent to which I/we may have the potential to create new alliances, new constructions of childhood which overcome some of these concerns? Finally, from a personal perspective, I want to understand how my own 'discourses', when I speak with policy makers or industrial organisations, can be shaped in ways which do not seek to create new 'universalising' discourses of children, but which can acknowledge the difference and diversity of childhoods today. I suppose the question, ultimately, is how I might 'articulate myself' differently within the socio-political debates around children and technology.

These are the more specific and personal 'problematics' that underpin my engagement with the research, there are, however, clearly more pressing social and cultural reasons for this exercise, which I will outline below.

4.3 Putting the CDA framework into practice

4.3.1 Identification of the 'problem'

It is enough to note that the boundary between childhood and adulthood, which modernity erected and kept in place for a substantial period of time, is beginning to blur, introducing all kinds of ambiguities and uncertainties. This is the soil from which the anxiety about the 'disappearance' of childhood grows and it is the feature of contemporary childhood that demands new approaches to its understanding and analysis. In particular, childhood studies should examine the processes and materials that go into the making of childhood, and, in a world of change, complexity and ambiguity, should be concerned to understand what is emerging as childhood's future. (Prout, 2005:34)

Prout, in the above quotation, clearly identifies the changing relationships between childhood and adulthood, within which digital technologies are assumed to be implicated, as a pressing problem for social studies of childhood. The 'problem' however, is not necessarily that such relationships may be changing (although this is itself contested, see for example Postman (1983), Steinberg & Kincheloe (1997), and discussions in Buckingham 2000) but is more precisely a problem of how adequately we are equipped either to understand or represent such changes which may be emerging and to ensure that they do not impact negatively upon particular groups in society. As discussed in Chapter 2, the boundary between childhood and adulthood is central to significant social institutions such as education and families, and its erosion potentially impacts on a wide range of areas of social life, from the public sphere to the workplace. Understanding what hegemonic articulations might be emerging in a 'revisioning' of childhood in the 'information age', examining what new relations of equivalence and difference may be being established, and exploring how these are being 'diffused' across new socio-technical formations is clearly, therefore, an important project. These concerns led me to a series of research questions which drew on the insights of Childhood Studies and the literature of children and socio-technical change, and which are informed by the goal of 'emancipatory critique' of Critical Social Sciences. I restate the research questions here as a guide for the remainder of the methodological discussion

1. how were children's relationships with digital technologies represented in the public domain in the late 1990s ?

2. how were the discourses of childhood and technology in this period mobilised to create consent for the reconfiguration of material and social practices in homes and schools?
3. to what extent were these representations and reconfigurations of material and social practices implicated in the redrawing of the boundaries between adulthood and childhood at this period?

4.3.2 *Analysis of the conjuncture*

In contrast with ethnomethodological accounts or conversational analysis approaches which have also taken as their focus the 'achievement' of 'common sense' ideas in social practices, Fairclough's conception of CDA envisages the analysis of 'conjunctures' as a means of exploring how hegemonic projects are played out:

Focusing on social life as practices is a way of mediating between abstract structures and concrete events, combining the perspectives of structure and agency. We suggested that analysis of 'conjunctures' – cross-institutional assemblies of practices around specific projects – might be a productive way of operationalising such a focus. (Chouliaraki and Fairclough, 1999:37-38)

This element of the CDA method has emerged at the intersection between CDA and Bourdieu and Bernstein's field/code analysis. Where in the past CDA (or its earlier instantiation 'Critical Linguistics') tended to focus specifically on individual texts, examining the processes by which meaning was produced within these, the more recent collaborations between CDA researchers and critical social scientists has led to a concern with understanding how these texts and social practices are situated within a wider network of social practices (see Chouliaraki and Fairclough, 1999: 112-119).

In terms of research design, incorporating Bourdieu's concepts in CDA implies more detailed (large-scale, including ethnographic) empirical projects than CDA has engaged in so far, so that a 'charcoal sketch' of field relations and structures and habitus can work as a backdrop for more detailed analysis of discursive practices. (Chouliaraki and Fairclough, 1999:115)

Given my concern with ideas of childhood as ideologies that may be both relatively enduring, and carry across a range of different social fields, this approach is particularly relevant to this study as it foregrounds an engagement with the wider

patterning of representational practices, rather than the specific focus on instances of interaction offered by other methodological approaches. The goals of the broad ‘analysis of the conjecture’, as defined by Chouliaraki and Fairclough are

to have at least a broad sense of the overall frame of social practice which the discourse in focus is located within. One aspect of the analysis of more immediate conjunctures is to locate the discourse in focus in real time in a way which links it to its circumstances and processes of production and its circumstances and processes of consumption, which brings the question of how the discourse is interpreted (and the diversity of interpretation) into the analysis. (Chouliaraki and Fairclough, 1999:61)

While I will focus more precisely in later chapters on exploring the ‘circumstances and processes of production’ of the data that will form the basis for the analysis, and the question of diversity of interpretation of this data in these fields, I provide here the ‘charcoal sketch’ of the specific historical conjuncture and of the field relations within which the discourses of childhood and technology are being addressed in this study.

Defining the period of analysis

If we are interested in how ideas of childhood and technology are formed and reshape adult/child relations, and if we are also interested in how these might be reimagined, it is appropriate to return to a historical juncture at which these relationships between children and technology were only just emerging, and in which their representations remained fluid, contested and partial. Specifically, attention to this period of emergence also allows attention to be paid to how previous representations, in particular the ‘dominant framework’ of child/adult relations, were drawn on as resources to shape emergent ideas of childhood.

The analysis will therefore focus on understanding representations of childhood and technology in the period 1997-2001. This specific period is selected for two reasons: first because, as discussed, at this time I was the primary researcher on the ScreenPlay project. This means that I have access to contemporaneous interviews with families and children and to ethnographic observations of these families’ interactions and practices. In principle, at least, this data should provide access to a point in time in which families were just beginning to ‘domesticate’ computers, and in which the discourses of children and technology were only beginning to enter

into the discourses of the family and the home. This is not to suggest that computers had not been present in family lives before this time, but to suggest that we were beginning to move beyond the groups of 'early adopters' to the beginnings of 'normalisation' of such technologies in a wide range of family homes. Indeed, by Christmas 1997, more than half a million people had spent £700m on the purchase of home computers, an increase of 20% on the previous years sales (Beattie, 1997).

The second reason for the focus on this period is a sense that it is in some ways a critical period in the development of new potential configurations of childhood and technology in and across the social practices of schools and homes.

In terms of the technological field 1997 was an interesting year: for the first time the IBM Deep Blue computer beat Garry Kasparov, the reigning world chess champion; the first 'blog' (weblog) was produced; the first massively multiplayer online game (Ultima) went live; Palm launched the first handheld 'Palm' computers; the first point and shoot digital camera was produced by Kodak; AOL boasted 10 million subscribers; the NASA website had 46 million hits after Pathfinder's Mars pictures were released; the BBC launched BBC News Online; 43% of US homes and 80% of US schools had Internet access and DVD sales were growing. In the same year, Wired, the bible of digital culture, produced a front page cover proclaiming 'the long boom' – heralding the possibility of never-ending increases in the quality of life and productivity thanks to new technologies; and new Internet companies were launched on the London AIM to significant success despite no proven track record and massive debts. Digital technologies were seen as reshaping the world, social relationships, the laws of economics; in short, 1997 was a year of what Woolgar (2001) has called 'cyberbole'.

We can also consider this a significant period as regards the relationship between children and technologies in the education field. While computers were introduced into British schools in the early 1980s, it was only with the election of New Labour in 1997 that a substantial programme of national investment in digital technologies, and in the infrastructure to network schools, city learning centres, libraries, homes and other sites, was initiated for educational purposes (the National Grid for Learning). Previous governments had supported pilot programmes, the

Conservative government had included ICT as part of the National Curriculum, but it was only with the New Labour government that the future of educational institutions and practices was presented as closely tied to investment in digital technologies.

At the same time, the 1990s were an important period in the production of studies of children and technology in the academic domain. Research in this period included, for example, Seymour Papert's 'The Children's Machine' (1993); Shirley Steinberg and Joe Kincheloe's 'The Corporate Construction of Childhood' (1997); Don Tapscott's 'Growing Up Digital' (1998), Douglas Rushkoff's 'Playing the Future' (1996); JC Herz's 'Joystick Nation' (1997). As Buckingham (2000) has argued, central to these (and other) publications was a 'generational rhetoric' which argued that children growing up interacting with digital technologies constituted a radical and significant break with the past, whether for good (e.g. Papert, Herz) or ill (e.g. Steinberg & Kincheloe) (Buckingham, 2000:41-57). In these analyses, children were seen as radically different in nature from those generations that had gone before them, and the difference was presented as such that it would reshape children's relationships with adults and wider society and require significant change in educational and childcare practices.

In other domains Titanic was a huge commercial success in 1997, winning 14 Oscars and earning over \$600m; the Chapman Brothers' London exhibition of models of young naked children generated newspaper headlines, Princess Diana died in a car crash in Paris; the 'Heaven's Gate' cult set up a website prior to committing mass suicide; the UK handed Hong Kong back to China; the first Harry Potter book was published; and Teletubbies was launched in the UK to the delight of clubbers and pre-schoolers and the consternation of the Voice of the Viewer and Listener.

The period 1997-2001 begins with the arrival of New Labour in Downing Street, continues through a period of concern and elation as the millennium (and the millennium bug) stalk dreams and aspirations and closes with hijacked aeroplanes flying into the twin towers, a point at which the 'cyberbole' of the global

information society was reshaped by fundamental questions about international and inter-cultural relationships. As Collier and Ong argue:

the period from roughly the end of the cold war to 9/11 was a decade in which many technological, political, and ethical problems seemed to be organised around the insistent spread of global forms; the 1990s were, to borrow a technical term from Michel Foucault, a governmentality decade. The dynamic changes were occurring along the axis of governmentality and biopower. Today, security and sovereignty are increasingly active sites of problematisation, yielding new tensions and problems (Collier and Ong, 2005:17)

While there may be some concern about the continued relevance of data and evidence gathered at a distance of some 5-9 years, it should be acknowledged that this approach enables access to a period of emergence, prior to our present conceptions of children and technology in which certain practices and concepts may have become so commonsensical today as to be overlooked. As Woolgar argues, these longitudinal and historical studies are of relevance not only so long as the technologies under discussion are seen as cutting edge, but because they may offer insights into 'alternative futures' through an examination of the historical circumstances that constrained or enabled particular practices to emerge:

Although claims about the obsolescence of technologies under academic focus are exaggerated, it is undeniable that the longevity of a careful social scientific research project will probably exceed the period when the technology under study is deemed cutting edge. Against this, it should be remembered that technology is only ever cutting edge for certain specific groups – for example, the supply side of the electronics industry and some (self styled) sophisticated users. Thus, for example, the telephone is still out of reach to large proportions of the population of the world as a whole. But this does not invalidate the study of its adoption and effects. There may be important lessons to be learned about the situations and circumstances that enabled and/or constrained take up. (Woolgar, 2002, p13)

Defining the 'fields' for analysis

What, then, are the 'fields' for study in this period, and what might I conceive as the relationship between these fields? I propose to examine three fields in particular during this period: 1) the political: through the discourse of New Labour in its first term in government; 2) the media: through newspaper coverage of children and technology in this period; and 3) the domestic sphere: through contemporaneous interviews with parents and children in the home.

Before going any further, however, I need to explain the exclusion from the study of the academic and industrial fields as a focus for analysis. There are a number of reasons for the exclusion of the academic field, the first being that there is some evidence that the academic research of this period has been limited in its impacts on widespread popular understandings of the relationships between children and technology. Menchik (2004), for example, argues that academic research in 'cyber-education' has failed to 'translate' to the fields of the media and policy. At the same time, however, I would also argue that the complex relationships between academic, policy, industrial and media spheres are such that it would be inappropriate to privilege the academic sphere as a site, above all others, of the production of 'knowledges' of childhood and technology. If we consider, for example, the number of surveys and reports presented in the media in 1997, only a small number of these originate in the academy, many of them are produced by commercial companies and many others by policy or lobbying groups (See chapter 6). At the same time, this study is not specifically concerned with the 'reality' or otherwise of children's interactions with technologies, which is the primary focus for the majority of these academic studies, but rather with the question of how the many potential realities of childhood are stabilised as 'commonsense' understandings of childhood in representations within the public and domestic spheres.

And what of the exclusion of the industrial field as a site for primary analysis? This exclusion is primarily due to the difficulty of accessing contemporaneous data from telecommunications, hardware and software companies. Unlike most academic or political texts, commercial texts 'circulate' in different ways; older websites, for example, are replaced, the advertising features in newspapers and magazines are not logged in databases of newspaper texts. The texts of the industrial field are ephemeral, elusive and shifting. At the same time, previous research (Selwyn, 1998, 1999, 2000; Noble, 1984; Goodson and Mangan, 1996) has provided accounts of the discourses of the telecommunications industry in its dealings with the education sector and from this I can 'read off' certain key assumptions about the discourses of this sector that will inform my analysis. In an early study, Noble provided a trenchant argument (based on US Freedom of Information laws which offered him

access to the internal documents of commercial companies) that after the 'thawing' of the cold war, the major telecommunications and hardware sectors turned to education as a 'new market'. The means of accessing this new market, Noble argues, was to construct digital technologies as an essential element of educational practices for economic and educational competitiveness. Central to this goal, and as a means of mobilising government and public support for massive public expenditure on ICT, Noble argues, telecommunications companies had to construct an equivalence between children's use of computers in school and their participation in the forthcoming 'digital age'. The development of the term 'computer literacy' (see also Goodson and Mangan, 1996), he contends, originated primarily as a strategy on the part of the telecommunications industry for 'rebranding' computers as the essential tool in ensuring children's future economic participation

...perhaps the most effective means of ensuring public co-operation is the rapid institutionalisation of 'computer literacy' through the premature installation of new requirements for schooling and jobs, which literally forces the population to accept a new set of dubious realities (Noble, 1984:609)

This rationale informed many of the early moves to introduce computers into UK schools, a move that was often led by the Department for Trade and Industry rather than the Department for Education (Selwyn, 2002), which suggests that its goal was to support the fledgling UK hardware/software industries rather than to support children (see, for example, the reliance on Acorn and BBC computers in the 1980s). By the 1990s, the UK government's 'National Grid for Learning' was clearly seen by industry as an opportunity to both create a new market and to create loyalty for their brands amongst UK children:

The [Grid] will of course also expand the market opportunities for all PC suppliers and we [Fujitsu] hope to get a fair share of this additional business. Our new range of PCs for education have been very competitively priced and we look forward to a whole new generation of young adults who have learned to love our products. (Stuart, CEO of Fujitsu cited in Selwyn, 1998)

While the thesis will not specifically analyse the discourses of the technology sector, therefore, it is possible to draw on these earlier analyses to inform my understanding of these discourses. We can assume that the goal of this sector is to create consent for the introduction of technology into UK schools in order to open

up a new market for the telecommunications industry, and that a key means of achieving this is both to reference the discourses of change of the 'information society', and to locate digital technologies as fundamentally supportive of longstanding educational goals – that is, to prepare children for future working practices. This is not a discourse that is driven by desires to reinvisage children's learning practices, or challenge adult/child relationships, but one which is characterised by appropriating the values and ideologies of existing educational relationships and creating equivalences between these and the use of digital technologies. It is a fundamentally hegemonic discourse in that it attempts to articulate itself with as wide a possible range of educational agendas as is necessary to ensure that its market expectations can be achieved. And it is a discourse premised simultaneously on ideas of 'change' (referencing the economic needs of an 'information society') and on ideas of 'stability' (technologies are presented as helping children learn better, smarter, faster, but not necessarily differently).

As with the texts and discourses of the academic sphere, however, I am primarily interested in how these industry discourses appear and come to be mobilised within the realm of public debate, how these different discourses are articulated together to create 'commonsense' understandings of childhood in the new formations of the digital age.

The study therefore privileges the political and media fields as these remain structurally significant in the production and reproduction of images of childhood (Silverstone, 1999; Fairclough, 2004; Hall, 1990); their function is to 'work on' discourse to create consent for new configurations of social formations, and hence experiences of childhood. In the policy field I focus specifically on the constellation of competing and contested ideologies known as New Labour. This is for a number of reasons (not least, as discussed below, due to issues of access to texts). Primarily, New Labour texts are selected for analysis because recent studies have located the policies of the New Labour government since 1997 as heralding a distinctive shift in the role of technology in the sphere of education (Selwyn, 1998/1999) At the same time, the policies and strategies of this government are seen as, to some extent, coterminous with the emergence of concepts of the 'information society', and the development of social policy to engage with this

perceived societal shift (Hall, 2005). New Labour policies in the period after the 1997 general election served to foreground digital technologies in the popular imagination and to create new materials and resources to encourage engagement with these technologies, such as the development of City Learning Centres, Community Online Centres, the National Grid for Learning and the New Deal. What I am interested in here is whether, and if so how, the creation of consent for such new social formations was premised upon the creation of new ‘commonsense’ ideas of children which in any way transform the ideology of the ‘dominant framework’.

With this focus on ‘commonsense’, it is clearly also impossible to ignore the role of the media in producing ideas of childhood. As Silverstone, Hall and numerous researchers in the much maligned field of media studies have argued, the media (in all their changing variety) have a central role in generating the resources upon which we draw on our production of ideas of the world:

It is in the mundane world that the media operate most significantly. They filter and frame everyday realities, through their singular and multiple representations, providing touchstones, references, for the conduct of everyday life, for the production and maintenance of common-sense [...] The media have given us the words to speak, and ideas to utter, not as some disembodied force operating against us as we go about our daily business, but as part of a reality in which we participate, in which we share, and which we sustain on a daily basis through our daily talk, our daily interactions (Silverstone, 1999:6)

The final field of the ‘family’ is also, I would argue, an essential field for study in this period. Not as a means of ‘testing’ the ideas presented in political fields against the ‘realities’ of family life (as though a study of 16 families will fully prove one reality over another), but because *families* are a central component of the ‘ideas’ of childhood. It is against their own experiences of family life that social actors test their ideas, it is in family contexts that discourses are recontextualised to form a texture for these discourses in practice. Importantly, it is *to families* that much of the discourse of this period is addressed – whether as voters, or as state subjects in the political field, as sites for correction or celebration depending on the political winds of the time; or as consumers, target markets for the purchase of new technologies. Centrally, and in contradiction of certain structuralist accounts of the relationship between discourse and ‘society’ (in particular Bernstein’s analysis), I would also

argue that families act as sites for origination of discourses of childhood and technology; politicians, technology company gurus, journalists are also, often, parents and as such have experiences of childhood in their daily lives which come to inform and shape the ways in which they represent children. The focus on the family field then, is complex – it is at once a site for the analysis of how ‘commonsense’ ideas of childhood in the digital age are circulated and set into patterns of relative stability; and it is at the same time, a site for analysis of the contexts within which such ‘ideas’ of childhood may come to originate in popular discourse. The families in the study, therefore, are analysed not as ‘in themselves’ realities, but their discourses and practices are examined in order to understand the multiplicity of different *potential* childhoods which could inform the production, circulation and stabilisation of particular ideas of childhood at this period.

Sketching the ‘field relations’

In terms of the flow of discourses between these fields, in the first instance we can conceive of linear ‘chains’ of relations, in which representations of childhood are generated in one site, recontextualised in another and operationalised in another. For example, we could conceive the image of the child using the computer at home for educational purposes as being produced discursively in the political domain through policy statements or documents, recontextualised in the media field and enacted in the domestic environment. A second approach, is to view the relations between fields as ‘choice’ relations. Rather than mapping the specific channels or routes of processes of articulation and recontextualisation through different elements of a circuit, this approach would view fields as being differently able to draw on a wide range of ‘decontextualised’ resources in shaping their practices. Indeed, if we conceive of ‘childhood’ as an ideological formation, its presence is likely to be felt across these different fields as a convention to be drawn upon.

Chouliaraki and Fairclough describe the distinction between these two relations as follows:

Given the interest in social change, there is an emphasis on how boundaries and flows of orders of discourse are shifting in late modern societies. Drawing on the terminology of systematic functional linguistics, the analysis has both a ‘choice’ (paradigmatic) and a ‘chain’ (syntagmatic) dimension. Choice analysis asks to what extent a particular type of communicative interaction draws upon a mixed

resource of discursive practices (genres and discourses) with low maintenance of boundaries within and across orders of discourse, or conversely sustains those boundaries. The key concept here is articulation : genres and discourses can become disembedded from particular orders of discourse and circulate as free-flowing elements capable of being articulated together in new ways, as the manifestation of processes of social change. As with choice relations, so with chain relations the emphasis is upon shifting articulations. Chain analysis charts channels between discursive practices within and across orders of discourse which systematically connect one discursive practice with another. [...] An important point is that a particular communicative interaction may be simultaneously located within a number of chaining practices. (Chouliaraki and Fairclough, 1999: 116)

A concept of 'chains' focuses on ways in which discourses might 'travel' and be recontextualised across different fields, and a concept of 'choice' might allow us to explore the generalised 'commonsense' representations of childhood that are drawn on in different settings. I would add into this, however, and based upon my discussion of the role of families above, a need for a 'circuit' analysis, which focuses specifically upon the relationship between lived experiences of children, their production in representations and the reciprocal testing of these ideas against reality. As Hay (2002) expresses it, there is a dialectical relationship between the ideational and material features of the social world which also (along with structural relations between social practices) determines the extent to which certain discourses or ideologies retain their longevity:

for particular ideas, narratives and paradigms to continue to provide cognitive templates through which actors interpret the world, they must retain a certain resonance with these actors' direct and mediated experiences (Hay, 2002: 212)

The field relations in this study can be conceived, then, as 'chains' of interlinked practices; as 'choice' relations, in which social actors in specific fields draw upon different resources to create social practices; and as 'dialectical' practices in which social actors test the discursive representations of the social world against their lived experiences and vice versa.

With my concern to understand the hegemonic struggle taking place at this conjuncture, these field relations need also to be inflected with a concern to understand what social actors are operating within these fields, what recontextualising principles govern the articulatory processes in these fields, which discourses succeed in colonising discourses in other fields. 'Chain', 'Choice' and

‘dialectical’ analysis, then, will need to focus specifically on questions of resistance, colonisation and recontextualisation across and throughout the different fields under analysis.

Justification for selection of texts

The political field

The texts selected for analysis in this thesis (see Appendix 10.1 for full lists of texts consulted) are shaped by three considerations:

Relevance to the subject of the thesis

Texts are selected because they form a body of data which provides an ‘overview of the field’, in other words, they provide a larger context within which we can understand the degree to which individual texts might be more or less representative²⁴. At the same time, texts are selected because they play a significant role in ‘chains’ of texts relating to the key issues of the thesis. In particular, I have made every effort to track down the chain of texts comprising Labour’s 1992 Manifesto commitments to education, Tony Blair’s ‘education, education, education’ conference speech in 1996, the Stevenson Report on the future of ICT in education in 1997, the ‘Connecting the Learning Society’ consultation document in 1997, the Demos/Bentley publication ‘Classrooms of the Future’ (1998). This dual approach is intended to enable both chain and choice analysis of texts.

Availability

Put simply, not all texts from this period are available. Only the Prime Minister’s speeches (and not all of these) are available in a searchable and usable file on the 10 Downing Street website. David Blunkett’s speeches are not archived prior to 2000, and only those accessible through other sources (such as Educationline) are available for analysis before this date. Early consultation documents are no longer available online and only accessible through library or personal copies. At the same time, key conference speeches, where Blair and Blunkett speak as members of the

²⁴ One of the difficulties in writing up this thesis was figuring out how I could reference some of the non-relevant but non-the-less interesting trivia/important ethnographic information gleaned from reading the full texts of all of Tony Blair’s speeches 1997-2001, including such promises as an iron-clad pledge to oppose the introduction of identity cards and a guarantee that the Millennium Dome would be a major international success at no cost to the taxpayer. But unfortunately, there was no direct way of relating this to the themes of the analysis and so they have had to be lost in the ‘recontextualisation’ process. Almost....

Labour Party rather than government, are only available by contacting the labour party headquarters, and even these are not always recorded. Key speeches by significant policy makers, such as Stevenson's keynote speech at BETT 1997 justifying the NGFL, are also rarely recorded and are today mainly only available through recollections of delegates or newspaper coverage of the period.²⁵

Previous analyses

Two previous studies, Selwyn's analysis of the discursive construction of the National Grid for Learning (1998/1999/2000a) and Fairclough's (2000) analysis of the language of New Labour, provide useful contextual material which obviates the need for detailed analysis of all New Labour texts.

The media field

Selection of texts for analysis from this period is governed principally by questions of availability. It is almost impossible to access or generate a significant database of audio-visual texts from the period to encompass film, radio and television output. As a result, the texts selected for analysis are drawn solely from the print media, and, moreover, the databases which are accessible to this researcher for newspaper analysis do not reproduce text in its original form (layout, accompanying images). This means that the analysis cannot encompass the full range of semiotic resources used to represent children and technology in this period but relies, instead, solely on linguistic resources which is far from ideal from the viewpoint of the potential for multi-modal semiotic analysis (Kress & Van Leeuwen, 1997).

However, the availability of the Lexis Nexis database does provide the researcher with a valuable tool for accessing all national and local newspaper articles produced during this period. As my interest is in whether we are seeing large scale shifts in representations of childhood at this period, an initial decision was made to focus the analysis solely on national rather than local papers. A preliminary search for articles referencing children and/or digital technologies and/or computers and/or Internet generated over 4,300 potential articles in this field during this period. For

²⁵ This difficulty in accessing texts raises interesting questions about the quality of archiving in the 'information society'. It raises the question of how we can hold politicians to account when their pronouncements and promises are not recorded. To some extent it is reminiscent of Winston Smith's work in the Ministry of Information as all records can be changed, deleted or lost. But this is the subject for an entirely different thesis.

the purposes of managing the data, I decided to focus specifically on articles in the years 1997 and 2001. As texts from the political and family fields were available for the full period, I wanted to focus the analysis of newspaper articles specifically on identifying macro level changes over this time; identifying the key narratives emerging in the newspaper field, and identifying the different field relations in operation during this period. The selection of these two years as focus for analysis enables this. In total over 900 articles were identified and analysed from all the major UK national newspapers. (see Appendix 10.2 for details of selection process and searches and Appendix 10.3 for articles subjected to detailed textual analysis).

The family field

The texts selected for analysis were generated from the case studies conducted during the ScreenPlay research project. These case studies were drawn from a questionnaire survey of 818 children in four communities in South Wales and South West England conducted in 1998. The questionnaire was used as sampling frame to identify 'high-moderate' users of computers in the home. 16 families were selected to provide a diverse sample of children in terms of socio-economic background, geographical location (urban/rural), family make-up, technology presence in the home. The case studies comprised 5 visits to each family lasting between 2-3 hours over the course of an 18 month period from Autumn 1998 to Spring 2000. These interviews were semi-structured and focused on: parental histories of computer use, siblings current computer use, children's current and previous computer use, locations and history of computers in the home, family negotiations around the computer, children's educational activities on the computer, children's other interests and activities. Each case study also comprised interviews with three friends selected by the child, and, on some occasions, interviews with a teacher nominated by the child (see Appendix 10.5 for copy of the interview frameworks). The final visit (5) consisted of video recording of children's interactions with the home computer.

All interviews conducted during the study were transcribed by a professional typist who was given a remit to transcribe text as spoken, but without any detailed transcription of other features of interactions such as pauses, overlapping statements etc. The transcripts therefore offer a record of the words spoken but

not the style, pace and non-linguistic features of the interaction (with the exception of laughter, which was always flagged up in the transcription).

In keeping with the original study's aims of offering diverse examples of computer use and family background the texts analysed in this study are drawn from all interviews conducted in the study, but focuses specifically on 6 households who were selected for two considerations: first, these were families I worked with personally and so I am able to draw on additional first-hand observations and second, these particular families offer a cross section of different geographical, socio-economic and family contexts (for a full description of the six families, see Appendix 10.6).

4.3.3 *Analysis of the discourse*

The key distinguishing feature of CDA as opposed to some other forms of 'discourse analysis', is that it pays specific attention to detailed analysis of language in texts in order to understand how such texts 'work on' and transform language in practice (Jaworski and Coupland, 1998). The tools for analysis which are offered by CDA in this respect are numerous. Given my interest in the emergence and potential transformation of ideas of childhood, however, my analysis will focus specifically on operationalising the theoretical concepts of 'articulation', 'hegemony', 'recontextualisation' and 'colonisation/appropriation' in analytical tools for textual analysis. In relation to these three areas, CDA asks that we pay specific attention to:

- the location of texts within chains or networks
- the orientation of the text towards difference, specifically identifying the ways in which the text manages difference and plurality
- the intertextuality of texts, specifically exploring how different voices are articulated together within texts
- semantic/grammatical relations, specifically whether significant relations of equivalence/difference are set up within texts
- representation of social events, particularly the representation of social actors, the representation of relations between different sites, the representation of processes

These approaches are intended to elicit the ways in which texts 'work on' and 'work in' social practices to stabilise or recontextualise articulations between different elements of the social world. This approach is best operationalised through the close analysis of limited numbers of texts.

In addition to this, in order to explore more effectively the way in which ideas of childhood are produced within and across different fields, I would also argue for an attention to the ways in which representations and semantic/grammatical relations are patterned across large numbers of social events using corpus analysis²⁶. Although Fairclough does not privilege this approach in 'Analysing Discourse' (2003), which forms the basis for the outline of analytic approaches above, his earlier work analysing the language of New Labour adopts this approach²⁷ and focuses specifically on 1) the recurrence of particular words/tropes; 2) the frequency of different meanings attributed to these words; 3) the collocations²⁸ of these words with other words. The patterns identified through this analysis are then compared with a corpus of texts from the 'old' Labour party, and the differences in occurrence, meanings and collocation are compared. Intertextuality can also be explored through corpus analysis by focusing attention on the ways in which different voices are patterned within a larger number of texts in a field.

In respect of analysing the texts selected for this study, I will focus specifically on 1) conducting a corpus analysis to identify regular patterns of occurrences and collocations of words and voices and 2) detailed textual analysis of specific texts selected as representative or significant within the field, drawing on the sensitising concepts of articulation, recontextualisation and colonisation/appropriation outlined above. Drawing on earlier discussions in Chapter 3, and linking these discussions with the approaches to textual analysis outlined above, Table 4-1: Relations of Theory, Analysis and Research Questions provides an outline of the

²⁶ The analysis of large numbers of texts through statistical means, usually using computer packages to compute occurrence and relations of different words

²⁷ See for example, Fairclough's analysis of the occurrence of and collocations with the word 'work' in the publications of New Labour (Fairclough, 2000: 58-60)

²⁸ Collocations are defined by Fairclough as 'more or less regular or habitual patterns of co-occurrence between words – a matter of 'the company a word keeps'[...] Collocational studies have been considerably advanced by the development of corpus linguistics, allowing co-occurrence patterns to be identified in very large corpora of texts (Fairclough, 2003:213)

ways in which these theoretical concerns are operationalised in specific approaches to textual analysis across the different fields in relation to the research questions, although it needs to be acknowledged that these elements all necessarily inter-relate both in practice and in the analysis:

Articulation	Sensitising tools for textual analysis	Relevant Research Questions
What concepts of childhood and technology are articulated together in representations of this period? What articulations are made between ideas of childhood and social practices and formations?	<ul style="list-style-type: none"> • Semantic and grammatical relations of equivalence/ difference • Representation • Management of difference • Collocation and corpus analysis • Choice analysis 	RQ1
Recontextualisation		
What principles govern articulation in different fields? How are representations of children transformed across different fields?	<ul style="list-style-type: none"> • Location of texts within chains/networks (interdiscursive analysis) • Changes in representations across networks • Changes in articulations across networks • Management of difference • Chain analysis 	RQ1 & RQ2
Appropriation/ Colonisation		
How do different articulations conflict in different practices and fields? How are different articulations combined in different practices and fields?	<ul style="list-style-type: none"> • Location of texts within chains/networks (interdiscursive analysis) • Changes in representations across networks • Changes in articulations across networks • Management of difference • Chain analysis and dialectical analysis 	RQ2 & RQ3
Hegemony		
What relations of equivalence and difference are established in these articulations and recontextualising principles? What social groups are articulated together in representations of childhood? Which elements of the 'social' can be considered 'floating' and therefore sites for struggle? What historical patterns of articulation inform articulatory processes?	<ul style="list-style-type: none"> • Semantic and grammatical relations of equivalence/ difference • Location of texts within chains/networks (interdiscursive analysis) • Changes in articulations across networks • Management of difference • Choice, chain and dialectical analysis 	RQ2 & RQ3

Table 4-1: Relations of Theory, Analysis and Research Questions

4.3.4 *Analysis of the practice re its discourse moment*

The aim of the thesis is to understand the role of the discursive in the production and maintenance of ideas of childhood, but also to understand this as interacting with and shaped by other elements of the social such as the emergence of new forms of technology²⁹ and the institutional and social practices of political and media spheres (see Section 3.2). As a result, I need some form of access both to the pre-existing social formations into which the discourse enters, and to the ways in which discourse comes to 'carry' and work across different institutions and practices. If we return to Laclau and Mouffe's concept of a hegemonic formation, for example, or Sayer's analysis of the relatively regularised patterns of relations produced in social practices, I need to work with a concept of a dialectical relationship between discourse and pre-existing social formations, in which discourse is 'materialised' in and within practices that can be understood as 'non-discursive', in that their meanings are not necessarily produced first and foremost through language. In this category we can include the spatial organisation of the home, the interface on a computer or the establishment of a network that links different sites together through cables. This is not to say that these elements are not shaped through social practices, but that the means of their analysis is likely to escape purely 'textual' procedures. How, then, to engage with these elements in an historical analysis that relies primarily upon 'texts' for its primary data?

In this thesis, I will view the historical texts on which I draw as both sites of discursive work subject to textual analysis, and as 'windows' which can be approached ethnographically to enable me to view the ways in which certain socio-technical formations were established in this period. Policy and media texts, for example, provide access to a wide range of accounts of non-linguistic elements of the social – from the building of high-speed computer networks to the development of programmes of teacher education to the types of computer hardware and software available to families. At the same time, as I have been

²⁹ It should be acknowledged that even 'new forms of technology' are not wholly material, but are produced at the intersection between the 'generative powers' of technologies and the meanings these powers are offered through social practice. These elements are also and already hybrid combinations of material and discursive elements (Prout, 2005; Lee, 2001; Woolgar, 1997)

working in this field since 1998, I also have access to personal 'ethnographic' information about the institutional arrangements that have been established on the basis of discursive work, for example, the ways in which such discourses have been introduced across schools. The advantage of working with the ScreenPlay texts, however, is that these were produced as part of an ethnographic study and therefore I can draw on my observations of a wide range of different aspects of these family lives – from the available technologies, to the spatial organisation of the household, to the urban or rural environments in which these families lived. While the focus for the thesis remains firmly on the textual and linguistic production of 'ideas' of childhood in the information age, this complementary ethnographic data will be used to provide insights into the extent to which these discourses encountered or overcame resistance to change in the wider non-linguistic elements of childhood in the late 1990s.

4.3.5 *Ethical issues*

The communities of most concern in this project are the families and children involved in the ScreenPlay research. This research was conducted under BERA guidelines with all subsequent data anonymised. All participants were invited to opt into the project, and informed consent was gained for participation (through a full initial discussion with researchers in which the aims and objectives of the project were outlined). Families and individuals were free to opt out of the project at any stage with individual family members free to determine whether they would be interviewed, and where in the family home these interviews would be conducted. On completion of the project, all families were invited to a discussion in which the researchers on the project described what we felt were the findings and the families were invited to respond to these descriptions of themselves and of their practices. The data being used in this thesis then, has been validated and approved by the families involved, who have all been happy with the degree of confidentiality and anonymity provided to them.

A second ethical issue can be raised in respect of this thesis which relates to the other researchers involved in the ScreenPlay project. The thesis will take a reflexive view of the project which may involve a reflection on all the researchers involved in the project. These researchers have been informed of my intentions and are happy

to agree to this process. They have also been offered the opportunity to comment on the thesis prior to submission.

The remainder of the data is generated from the public domain and therefore issues of anonymity and confidentiality are not relevant. Through clearly identifying the basis for selection of data and processes of analysis, misrepresentation of any individual should be avoided.

4.3.6 *Function of the problem in practice/ ways past the obstacles*

The identification of the ‘function of the problem in practice’ and ‘ways past the obstacles’ as part of the CDA method are described by Chouliaraki and Fairclough as a shift from ‘is’ to ‘ought’. It is crucially related to the ‘critical’ disposition in the research, in that it involves a sense of there being other ways of conceiving of the world, and to the focus on discourses of childhood as hegemonic and constituted through the antagonisms of different social groups.

From a methodological perspective, this disposition requires an engagement not only with ‘descriptive’ practices, but with the attempt to identify gaps and possibilities that emerge for social transformation within social practices (Chouliaraki and Fairclough, 1999:65). Essentially, this element of the method is concerned specifically with the question of whether power relations can be ‘read off’ from the analysis; whether the maintenance or change in childhood assemblages can be seen to benefit certain groups over others, and the means by which understanding these changes can contribute to transforming relations of power. Rather than viewing this as a separate ‘stage’ in the methodological framework for this thesis, however, I will be incorporating this within the analysis throughout. As Chouliaraki and Fairclough argue

in actual analysis it may be difficult to keep [the description of a ‘problem’ and the explanation of a ‘problem’] apart (1999:65)

This focus will also form the basis for the discussion of the thesis in Chapter 8.

5 Ideas of childhood and technology in the political field 1997-2001

5.1 Introduction

This chapter provides an account of the representations of children in the discourses of the 'information society' in New Labour texts between 1997 and 2001. It begins by discussing some of the ways in which commentators such as Fairclough and Hall have analysed the distinctive use of language by the New Labour Government. It then goes on to analyse Tony Blair's 1996 pre-election 'education, education, education' conference speech, and the ways in which this set out the dominant narratives for New Labour policy on education and technology. The chapter moves on to discuss how these narratives were translated into education policy and practice, through the Stevenson Inquiry and the establishment of the National Grid for Learning Agenda. Following this, I discuss the instabilities in the articulations of education with children's use of technology that emerge in this period, both from outside and inside New Labour. I conclude with a discussion of two central paradoxes which emerge in discourses of childhood in the information age in these texts.

5.2 Context: the language of New Labour

In the early months of 1997, New Labour were attempting to overturn a small Conservative majority in the House of Commons to become the first Labour government for 18 years. Five years before they had been subject to a humiliating defeat by what was commonly considered to be a 'lame duck' administration led by John Major. Neil Kinnock, architect of the early Labour party reforms, had resigned following this defeat; the next leader, John Smith, a spiritual 'half-way house' between old and new Labour, had died prematurely from a heart attack; and Tony Blair, having wrested the leadership of the party from Gordon Brown, had become the new leader and was at this time Prime Minister in waiting. Elected leader in 1994 Blair had become the figurehead for the 'New Labour' project symbolised most significantly by his removal of 'clause 4' which had committed the party to public ownership, the last full commitment to 'old socialism'.

By 1997, both before the election and afterwards, New Labour practices were characterised by a new form of political campaigning, associated with almost fanatical control of the party's media image and language. Language and its control, argues Fairclough, was central to the 'project' of New Labour in its early years – a way of reclaiming, redefining and controlling words to create new ways of conceiving the world:

Language is crucial in the politics of New Labour. Language has always been important in politics, but the way New Labour does politics makes it more so. Why for instance did the Labour Party change its name to 'New Labour'? According to one of its key advisers, Blair 'knew that only by contrasting 'new' Labour with 'old' Labour explicitly would the electorate believe that Labour had changed and could be trusted'. In other words, changing the name wasn't just reflecting a shift in political ideology, it was manipulating language to control public perception (Fairclough, 2000, pvi)

One explanation for this is that the New Labour project can be described as a 'hybrid' regime, composed of 'neo-liberal' and the 'social democratic' strands with potentially antagonistic goals (Hall, 2005). This hybridity is understood to inform a hegemonic project which, in Laclau and Mouffe's terms, requires creating equivalences across these different groups in the use of language, a process which was understood in popular discourse of the time as 'spin':

'spin' also has the much deeper function of 'squaring circles': representing a broadly neo-liberal project, favourable to the global interests of corporate capital and the rich, in such a way that it can mobilise the popular consent of Labour voters and supporters, the trade unions, and the less well off in society. This sleight of hand can only be done by continuously sliding one agenda into or underneath another. The New Labour phenomenon of linguistic slippage is thus a function of its double-pronged mode of address [...] It masks the consistent shift of direction from public to private, by exploiting the vagaries of words like 'change' or 'radical' which can point in any direction. (Hall, 2005:333)

Fairclough identifies a number of important ways in which the New Labour government 'worked on' language to create consent for policies both within the party and in the country at large.

In the first instance, he argues that the processes of presentation and policy formation have become merged, so that 'there is no clear line between finding policies that work and policies that win consent'. This change, he argues, emerged from changed relationships between policy makers and public which are

characterised by an increased reliance upon focus groups and market research to gauge reaction to and shape presentation/policy. This change also manifested itself in an increasing tendency to present consultation documents in the form of a 'hortatory report', ostensibly consultative but operating primarily as a means for generating public awareness of and consent for policies.

A second key change in the use of language that Fairclough identifies is the increased 'mixing' of genres. This, Fairclough argues, results in both the 'conversationalisation' of politics, in which the discourses of the everyday are introduced into the language of policy and the Prime Minister is produced in the distinctive identity of the 'everyman':

A crucial part of the success and apparent continuing popularity of Blair's style is his capacity to, as it were, 'anchor' the public politician in the 'normal person' [...] Blair's political identity is anchored in his personal identity; or more accurately, in how his personal identity is constructed in his public performances (Fairclough, 2000:7, 98)

Central to Fairclough's analysis of the language of New Labour is the charge that New Labour has shifted from an explanatory logic which identifies causality in human affairs to a 'cascade of change' rhetoric characterised by lists, nominalisations and equivalences. To explore this further, Fairclough identifies the absence of agency (nominalisation) in New Labour rhetoric; for example, phrases such as 'capital is mobile' or 'the new global economy refashioning our industries' obscure the agency of social actors (in this case transnational corporations) in such processes. This nominalisation also serves to obviate the need for an explanation of who the social actors are, why they might be acting in certain ways, and how government is to respond to these.

A reliance upon lists is a similar linguistic strategy for avoiding the need for explanatory logic by rhetorically constructing an 'inevitable' future in which the relations between different social changes are not explained but presented as equivalent and inevitable transformations:

We all know this is a world of dramatic change. In technology; in trade; in media and communications; in the new global economy refashioning our

industries and capital markets. In society; in family structure; in communities; in life styles. (Blair, quoted in Fairclough, 2000:28)

Finally, Fairclough identifies the establishment of relations of equivalence through lexical and semantic forms in New Labour as a means of producing consensus and glossing over differences. For example, he identifies 'not only.... but also...' as a key trope in New Labour discourse, as in 'not only economic competitiveness but also social justice', a 'third way' rhetorical twist that implies equivalence and compatibility of these two goals; what Hall calls the 'New Labour Double Shuffle'. This is also implicated in the production of a 'one nation' politics in which 'we' the nation are produced as a homogeneous whole in competition with other nations. This 'we' the nation also slips ambivalently and ambiguously into 'we' the government', reinforcing Fairclough's argument that:

texts are processes in which political work is done – work on elaborating political discourses, as well as the rhetorical work of mobilising people behind political discourses. (Fairclough, 2000:158)

This relationship between 'talk' and 'action' and the role of language in mobilising support is made explicit in Blair's assertion that:

'We will have succeeded when the achievements of our children match the passion of our pronouncements' (Blair, 1999)

Hall, Fairclough and others have described this shift in the use of language in government as a shift towards governmentality, in which the focus of government is on achieving changes in society through shifts in culture and in the constitution of identities of social subjects:

The state's 'educative' function combines intensive micro management and centralisation of targets with more strategic interventions exercised culturally and 'at a distance'. The latter is a neo-Foucauldian, 'governmentality' approach – controlling behaviour and outcomes, not by direct constraints, but through the active enlistment of the consent and 'freedom' of individuals [...] Knowing that individuals can occupy various subject positions, the New Managerialism aims to reproduce all of us in the new position of practicing 'entrepreneurial subjects', by fostering certain capacities while downgrading others, shifting individual behaviour (whatever our consciences tell us) indirectly by altering the environment in which people work and operationalising new values by 'modernising' old practices. You change what individuals do, not by changing

their minds but by shifting their practices and thus the 'culture' as well. (Hall, 2005:327)

Turning now from more generalised discussions of New Labour language, to a focus on New Labour's language about children, Fairclough makes two arguments in this area. First, he argues that Education is prioritised in New Labour policy specifically in an attempt to reconcile the potentially contradictory goals of 'social justice' and 'economic competitiveness'. It acts in this discourse (and policies) as the crucial means by which to overcome the ambiguities and ambivalence of an attempt to reconcile different political philosophies within the Labour Party and the country as a whole. The focus on education is what Fairclough calls the 'crucial step in constructing the logic of the Third Way' (ibid.:43), namely that the action 'needed to make Britain (British business) more competitive in the global market is also the action that is needed for social justice' (ibid.: 43). The renewed commitment to education is seen as the bridge between these two goals. This emphasis on education suggests that it is in shaping children and investing in them that the ambivalence and logic of 'Third Way' politics is to be worked out. Fairclough, however, is no educational historian and other commentators would describe this linguistic move as one which is characteristic of post-war educational agendas, which elide the educational achievement of social mobility with economic success (see Brown, 1997:395-397).

The second of Fairclough's observations of specific relevance to the production of new representations of childhood is that New Labour policy, in particular Blairite policy, is informed by the communitarian philosophy of John McMurray. This is 'basically the idea that individuals are created through their relationship to others in families and communities' (Fairclough, 2000:38). This philosophy, argues Fairclough, has informed the discourse of 'rights and responsibilities' and 'duties' which informed much of the rhetoric of New Labour in the late 1990s, and which established a relationship between the state and the individual as being one in which 'something for something' was the underlying principle for social change: support for childcare in exchange for finding work, extra funding in exchange for reform, and so on. Fairclough then argues that this discourse and the relationship between individuals which it imagines, is extended into the domestic sphere, with the concept of the relationship between parents and children conceived similarly as

an exchange of rights and responsibilities. He cites Blair's 1994 Leadership Speech in evidence:

Both family and community rely on notions of mutual respect and duty. It is in the family that we first learn to negotiate the boundaries of acceptable conduct and to recognise that we owe responsibilities to others as well as ourselves. We then build out from that family base to the community and beyond that to society as a whole. The values of a decent society are in many ways the values of the family unit, which is why helping to re-establish good family life and community life should be a central objective of government policy, and cannot be done without policies, especially in respect of employment and education, that improve society as a whole. We do not show our children respect or act responsibly to them if we fail to provide them with the opportunities they need, with a stake in the society in which they live. Equally, we demand that respect and responsibility from them in return (Blair, quoted in Fairclough 2000:43)

The relations between children and adults, far from being conceived as a matter of private concern and individual preference, in this formulation, are seen instead as potentially subject to government involvement. As Fairclough argues:

Blair represents the family as a sort of public space – he constructs the family through a discourse that is more usually applied to public institutions such as schools, representing family life in a formal and distanced way by emptying it of its intimacy through applying to it public categories such as 'mutual respect' and 'acceptable conduct' (ibid.:43)

Importantly, however, we could interpret this view of the family as a sort of public space as a hegemonic 'move', as it provides the possibility for constructing specific sorts of families as 'appropriate' or 'inappropriate'. It begins to construct equivalences between certain sorts of behaviour and the concept of the 'ideal family', equivalences which, as I shall discuss below, may emerge from Blair's own personal self-construction as a 'good parent'. At the same time, that New Labour discourses of childhood at this period focus either on the production of 'ideal children' in discourses of family and schooling, or on 'problem children' in discourses of anti-social behaviour, suggests a profoundly ambivalent relationship to childhood, one which serves to construct certain children, in certain places, as appropriate to 'childhood' and others as profoundly problematic. There are children who are 'in their place' and those who are 'out of it'; what remains to be seen is how these two views of childhood manifest themselves in discourses of children's use of technology as this period develops.

What are the implications of such representations of the relationships between adults and children in the 'ideal family' for our understandings of childhood in late modernity? Fairclough, unsurprisingly, as his focus is not the sociology of childhood but the role of language in the public sphere, goes no further in his analysis in this respect. The remainder of this chapter will further explore how our understanding of childhood in 'a world of dramatic change' is produced through the language of New Labour. Is what we understand by 'childhood' seen as similarly subject to such changes in this discourse?

5.3 Blair's 1996 conference speech

Tony Blair's 1996 speech to the Labour Party Conference in Blackpool is today best remembered for the phrase 'education, education, education'. His last speech to the Party as leader of the opposition and his most widely publicised speech prior to the election of the following year, this event served to consolidate Blair's vision of New Labour and his aspirations, as Prime Minister, for the next five years of office. As such, while predating the 1997 election, it serves to some extent as the 'Ur-text' for New Labour policies on children, education and technology for the 1997-2001 period. It generates the overarching narrative resources on which later texts will draw. It is back to this speech that he refers when launching educational initiatives between 1997 and 1999, and to this speech that David Blunkett refers when setting out and justifying the government's agenda in education. Indeed, it is also to this speech and its rhetoric that detractors and opposition parties referred at any time of educational crisis, as its aspirations and promises had become the benchmark against which Labour was to be judged in its first term in office. What, then, did this speech 'do' for childhood at the end of the 21st Century? What relations between adults and children were established in this speech, what articulations of childhood and technology were envisaged in the policy initiatives imagined here, and what potential sites of instability and change can be envisaged in these articulations?

Where better to start than by considering the famous 'education, education, education' line in the speech, locating it in its context both to the remainder of the speech and wider New Labour education policy.

*[134] Ask me my three main priorities for Government, and I tell you:
education, education and education*

[135] The first wonder of the world is the mind of a child

*[136] I sometimes sit reading a paper or watching TV, and look up to see my
children at a computer, and marvel at what they can do; using that computer as
easily as we read a book*

[137] We are 35th in the world league of education standards. 35th

[138] They say give me the boy at 7 and I'll give you the man at 70

*[139] We'll give me the education system that's 35th in the world today and I'll
give you the economy that's 35th tomorrow. (Blair, 1996)³⁰*

This sequence of sometimes disconnected clauses attempts to articulate a number of different elements of social life.

First, its overall narrative logic is the assumption of a causal relationship between educational investment and economic success which is familiar from the narratives of the 'investment state' (Jenson, 2000). This is achieved through the metaphor of the child in line 138 being paralleled with the educational state in line 139. This relationship locates children within the familiar role of incomplete educational subjects who function as a resource for the state – investing in children is investing in future economic success (failure to do so is guaranteeing economic failure). This relationship is seen as underpinning and acting as warrant for the statement of 'education, education, education' as priorities for government, albeit a warrant for which no evidence is offered. This relationship is presented as an 'assumption' in the text, a relationship which is seen as unproblematic and inevitable. That investment in children will function as a means of securing economic success is an ideological articulation, obscuring the particular world view upon which it is based.

When we look at this sequence of clauses, however, clauses 135 and 136 are semantically superfluous – there is no need for their insertion in order to create a coherent argument. What, then, do these two clauses do?

In the first instance these clauses serve to produce a specific identity for Tony Blair. They introduce him as a parent by invoking the image of his children, and

³⁰ The text here is laid out as it was sent to me by Labour Party Headquarters. The line breaks are as they appear in that text and these breaks interestingly foreground the extent to which the speech was written with the soundbite rather than the coherent argument in mind. The numbering I have included for reference purposes.

thereby act as warrant for his right to speak about children and education. Clause 136 both 'humanises' the speaker, locates him in a similar position to his audience ('as easily as *we* read a book') and establishes his credentials to speak for children (in his role as parent).

At the same time, however, this reference to 'real children' also works on the rest of the narrative in this sequence. The clauses produce a specific relationship between children and technology which locates childhood as a space with a privileged relationship to digital technologies. Clause 136 sets up an opposition between the adult world (of print/broadcast media) and the child's world (of easy use of interactive technologies). In so doing, the adult is established in a deficit position to the child in relation to the world of digital technologies.

This 'privileged' relationship between child and technology is, however, incorporated in and subordinated to the wider semantic structure of the text and narrative logic of the sequence. This produces the child's ability with technology as a potential rather than a given, and a potential that will only be realised through educational intervention. As such, it contradicts the idea of the child in a privileged position, and produces the child as dependent upon adult/educational intervention to achieve this relation with technologies.

These two contradictory ideas – the paradox of the child as 'natural computer user' *and* the child as dependent upon adults to achieve this identity – are held in balance in a hegemonic articulation which attempts to obscure the differences between these two 'ideas' of childhood. In a similar way to Jenson's LEGO paradigm, these clauses produce children both as the model *for* ways of coping with the information society, and the focus for investment in order to achieve these goals. Arguably, this is because the 'work' of this text is focused on producing effects *on adults* rather than on children, on creating consent for the idea of the information society as heralding inevitable change. The competence of children's computer use is invoked in support of and as warrant for discourses of 'change', but this is then articulated with discourses of educational investment in such a way as to attempt to render the temporary representation of the already 'competent' child unproblematic.

This process is patterned throughout the speech. Throughout, both childhood and technology are represented as symbolic of significant social change, but their agency is discursively neutered by their colonisation within the familiar narratives and institutions of the state: the education system and the family.

For example, while technologies are presented as both the cause for and means of achieving significant social change:

[11] We live in an era of extraordinary, revolutionary change. At work, at home. Through technology and the million marvels of modern science.

[153] The Age of Achievement will be built on new technology

This change is presented in the speech as being managed solely through educational initiatives (of all the references to technology in the speech, only one is to technology use outside education). Looking at Blair's overarching educational objectives, however, we see this introduction of technology not as heralding the transformation of educational goals, but a renewed commitment to 'the basics':

[143] every primary school child leaves school able to read to adequate standard.

[144] I announce that we want to establish 3 week intensive literacy summer schools with the aim of ensuring that every 11 year old is up to standard in reading

Technologies, while potentially disruptive and challenging to our understanding of society, then, are to be harnessed to the achievement of pre-existing and age-old educational objectives of literacy and numeracy. New Labour can be *both* 'information age', and committed to basic needs of all children in this articulation. In this way, Blair's conception of the role of technologies in education can be seen to be complicit in the industrial discourse which served to produce 'computer literacy' as a central requirement of education 'for the information age' (Noble, 1984).

At the same time, while children might also be seen as potentially disruptive, as 'out of place' (Lee, 2001) in the modern world both through their relationship with new technologies and in their occupation of streets and cities, the speech attempts to

relocate them within the family. Central to the speech, for example, is the rewriting of Labour Party history as a history of parental and generational aspiration:

[66] In 1945 when miners voted Labour, they did it so that their sons would not have to go down the pit as they had.

[67] And in 1964 their children voted Labour because they saw the next generations' chance to go to university and do better than their parents had done.

[68] The true radical mission of the Labour Party; new and old; is not to hold people back but to help them get on.

[69] Each generation doing better than the last

[70] The heritage of hope from parents to their children

[71] Now, for the first time, at risk, in this generation, with this Government

[72] Our task is to restore that hope, to build a new Age of Achievement in a new and different world.

[73] Today we compete in the era of global markets. There is no future for Britain as a low wage, low skills, low tech economy. We compete on quality or not at all. This means a stable economy, long term investment and the enterprise of the people set free

(Blair, 1996)

This alternative history, this moral mythology, presents a history of the Labour movement as one of *parental* aspiration, of *generational* development. This reworking of Labour history as a history of parental aspirations is neither simply fortuitous nor accidental; it is central in the speech to Blair's positioning of himself as at once politician and parent, as both statesman and 'of the people'. He describes himself as:

[11] a father, as a leader, as a member of the human family.

This element of the Blair identity is often overlooked, yet his status as father and family man is an important warrant for the arguments made by New Labour that education is 'safe in his hands':

If we are elected, he will be the first ever serving Prime Minister in British history whose children attend state schools. This is a personal commitment, a personal understanding and a political priority from the heart of his family. This is the difference between us and the Conservatives' (Blunkett, 1997)

Central to the speech is the universalisation of Blair's specific parental experience to the public sphere, the extension of Blair's role as father to 'ideal' parenting practices envisaged in all families in the country.

the private passion we feel for our children should become the public passion we feel for all our children (Blair, 1999t)

In this light, Blair's production of an equivalence between himself and the adult listening audience in his description of his children's use of the computer at home, functions not only to create a sympathy between him and his audience, but serves to create a 'subject position' for his adult listeners whereby they are invited to equate and compare their experiences with his own. It serves to obscure the differences in the experiences that individual parents might have in order to produce a shared ideal of 'parenting' under New Labour. In the overall logic of the speech, the computer-using child is thereby produced as the last in the link of the generational progress of the Labour Party; from going down the pit in 1945, to using computers to, it is implied, competing in an 'era of global markets' in the 'age of achievement'. And the listening parents' aspirations for their children are produced within this teleological imperative. The 'commonsense' assumption is that 'good parenting' involves commitment to children's access to technologies. That this 'commonsense', however, might be a hegemonic articulation in which one group (the middle-classes, specifically identified with Blair) serves to create equivalences between itself and other families is in evidence in the ways in which Blair invokes his own family as a 'warrant' for his pronouncements on children's use of technologies. This is a practice that continues throughout his premiership, consider, for example, the anecdote reported by one journalist on Blair's visit to a local school:

Fourteen year-old Melanie Hewitt doesn't give a damn about information technology...she wants to be a model...But Melanie is polite as well as good looking, and she made all the right noises when [the Prime Minister] singled her out for a chat 'I expect you're like my own children, playing with the computer all the time' he said....Melanie did not like to disillusion him (Jackson, 1997)

This speech produces a number of 'ideologies' of childhood in the digital age. First, it creates a commonsense assumption of equivalence between investment in children's use of digital technologies and the future economic success of individuals and the state; second, it constructs the twin sites of the school and the home as implicated in the production of 'future workers'; third, it constructs an 'ideal'

parenting position, which equates care for children and their future success, with the purchase and use of technologies in the home. Underpinning these assumptions is the idea of the child as a 'natural computer user', and of digital technologies as both causal of significant social change, and as (in their purchase in homes and schools) the means of taming and managing that change through children's acquisition of computer skills.

These assumptions are key to the creation of consent for what would become the 'National Grid for Learning'. They prefigure discourses of children and parents as willing users of computers in the home for educational purposes, and of the state as justified in establishing networks that would allow the school to be more effectively accessed in the home. It attempts to create consent for the creation of a new 'assemblage' (Lee, 2000) of childhood linking together school-home-technology-child in a seamless relationship.

For this to be effective, however, requires the widespread acceptance and internalisation of these commonsense understandings, as a means of generating new configurations of relations between the social institutions of homes, schools, technology industry.

5.4 Stevenson to the National Grid: building the consent for new social formations

The work of 'building the assemblage' of school-child-technology-home in New Labour's education policy fell first to the Stevenson Inquiry and then to the National Grid for Learning initiative. The Stevenson Inquiry (named after its chairman and funder Dennis Stevenson) was tasked by Tony Blair and David Blunkett to present an 'independent' 'state of the nation' overview of ICT in schools and specifically to:

Summarise the current situation (both good and bad); to look objectively at the benefits; to identify what they see as the main technological choices and how we should approach them; to look at the consequences for the curriculum, teacher training and school organisation; and finally to look at how this can be funded using public-private partnership. (Stevenson, 1997, p35)

The primary function of the Inquiry was to produce an agenda for ICT in schools and to create the conditions by which this agenda might be accepted³¹. As a result, much of its work is discursive and focuses on 'naturalising' the articulation of education and technology in the service of economic competitiveness. First, it constructed the provision of ICT in schools as a matter of cross-party national interest, proclaiming the need to be so great that matters of political difference should not interfere, and addressing its findings to

politicians of all persuasions and to all those with an interest in the education of young people. (Stevenson, 1997, p5)

The relationship between technology, children and education was hereby constructed as existing in a privileged space (often only accorded to matters of national defence) outside party politics or ideology, which attained the status of an issue of 'national security' concern in a time of international competition³²:

Our judgment is that developing students' competence in ICT is now an essential part of the nation's infrastructure and, in the national interest, Central Government cannot afford not to do it. (Stevenson, 1997, p10)

The construction of the inquiry as 'independent' is central to this move, it avoids reference to the positioning of the social actors involved, and it serves to obscure the different ideological and commercial interests that structured this report³³. Instead, ICT competence can be presented as a 'natural' element of education in

³¹ Although the remit for the Inquiry was the UK, Stevenson later (2003 at BETT) stated that the report was still, at that time, being accessed by 1000s of web visitors and was being used as a blueprint for international development of ICT strategy in education (personal communication with audience member)

³² Fairclough (2000) examines the ways in which the New Labour discourse produces relations of competition rather than collaboration between nations by eliding 'national' interest with the interests of 'national' industry. Selwyn (2000) also argues that the NGFL programme's primary function was not the enhancement of educational experiences for children but the development of new markets for British business. Both of these arguments highlight the ways in which ICT in education was constructed at this period specifically around certain assumptions about the role of government which effectively 'silenced' other commentators' perspectives on the potential role of digital technologies to enhance collaboration and community across the globe (see, for example, McLuhan, 1964; Jones, 1997)

³³ Although the report repeatedly emphasises its independence from the Labour Party and indeed from any political allegiances, its self-presentation as independent needs to be treated with caution given that its chair and funder Dennis Stevenson was also Chair of Pearson, one of the leading publishers of educational software and curriculum materials. It is worth noting that when published, the report argued that the provision of software was a national priority, and the original conception of the technological element of the NGFL was of a network that would allow access to the best of UK educational software which would then act as a 'shop window' for such software to the rest of the world. 'Independence' from political parties in this context should not be taken to mean neutral.

the 'information society', and as such it becomes possible to present the failure to invest in ICT as a risk to a 'generation of children' and to the UK as a whole:

We have concluded that if the next government does not take steps to intensify the use of information and communications technology (ICT) in our schools, a generation of children - and a generation of adults as teachers - will have been put at enormous disadvantage with consequences for the UK that will be difficult to reverse. (Stevenson, 1997, p4)

Moreover, it presents the need to use technology in education as so self-evident as to require no empirical evidence or justification:

It will be a very long time, however, before there is conclusive evidence to justify the substantial investment by the community at large that we believe to be necessary; and by the time this justification is achieved, almost certainly a generation or two will have lost out not to mention that the investment then required will be different! [...] It would, after all, be remarkable if school education turned out to be the one area in society where effectiveness and productivity were not dramatically increased by the application of ICT! (Stevenson, 1997, p14)

As with Blair's conference speech, however, the argument that technologies are radically transforming social life does not translate in the Stevenson Report to an argument for radical change in educational goals or practices (such as those advocated by Papert, for example). Instead, the aim of the report is to produce consensus for the adoption of technologies for education *within* the existing practices of education. ICT is promoted as helping 'effectiveness and productivity', 'The role of ICT is to serve education' (p15); most significantly, the analogy put forward is with electricity, an analogy which comes to underpin the idea of the 'National Grid' for Learning:

Electricity - once regarded as a strange, almost frightening wonder of the age - has come to serve almost every aspect of society. (Stevenson, p15)

The potential oppositions to this view of technology, specifically amongst teachers, are overcome by acknowledging the fears and concerns that readers might have about technologies' potentially destabilising function in society, and by reassuring readers that ICTs can be introduced in the service of pre-existing educational goals. Again, this text serves to reference significant change by reviewing the changes in

other areas of society, but limits the potential implications of such change by arguing that these technologies can

be used in the service of the curriculum, and made available to teachers to manage the learning process, however that is defined by them (Stevenson, 1997:17).

This report does not intend to scare the horses, and it reassures the reader that power and control over technology remains with the traditional gatekeepers of education – the teachers. The child as ‘leader of the information revolution’ is firmly absent from the text, instead, it is the child as educational subject in a deficit position who is repeatedly presented. The articulatory practices in this text are focused specifically on overcoming differences in attitudes towards technology and educational values amongst different groups of the teaching profession, and to harnessing their support for such changes.

Given this construction of the relationship between education and technology, therefore, it is not surprising that National Grid for Learning policy between 1997 and 2001 would focus specifically around the creation of an infrastructure that would maintain rather than disrupt educational practice, and with it, adult/child relations³⁴.

Its material instantiation was the development of a £1.7 billion programme of activities (Selwyn, 2000) which focused in practice primarily on two key areas³⁵:

³⁴ Between 1999 and 2000 I worked on the evaluation of the ‘Pathfinder LEAs NGFL’ project funded by DFES and managed by BECTA. The central aims of this evaluation were to assess the progress made by the NGFL in terms of technical capacity of schools to use ICT, in terms of teacher training and in terms of the use of ICT in Teaching and Learning. Limited goals were established in this evaluation to examine whether technology was being used to transform educational practice, instead, we were often asked to assess against traditional goals of ‘SATs’ scores, and raising standards in literacy and numeracy. This was a feature also of the later IMPACT2 project and the ICT Testbed project, both of which were asked to assess the impact of ICT against the goals of raising standards. While the academics involved in these projects have contested these aims, it is nonetheless apparent that the primary objective of ICT in education as conceived within the wider goals of the DFES is in the achievement of efficiency and productivity in results measured against raising traditional standards.

³⁵ While both Stevenson and the Connecting the Learning Society document emphasise teacher training and the development of a software market as the primary goals of the NGFL, it is arguably the case that the investment in hardware and infrastructure was a higher priority than the development of software. Indeed, the government has invested little in software, has attempted to stay out of the field seeing it as a ‘private sector’ concern and has primarily engaged in creating ‘shop windows’ for software through, for example, Curriculum Online. It is only with the BBC’s

first, the establishment of a teacher training programme and second, the building of a robust technical infrastructure for schools. These two priorities brought with them a range of other social actors: the technology industry became a significant actor in the education field (Bill Gates, for example, was brought in to 'advise' on the NGFL³⁶ strategy and the BETT³⁷ trade show, although longstanding, became a port of call on the ministerial calendar); major contracts were also handed out to a range of suppliers from universities, to software developers and small training companies for NOF³⁸ training for teachers. Teachers were given laptops or given subsidies to enable them to purchase laptops. In this modernising agenda new institutions were also established: the National College for School Leadership was born with a specific strand of training on the use of ICT in schools, and the NCET³⁹ was reconfigured as BECTA.⁴⁰ The material structure of schools was also subject to change with a programme of investment in buildings and infrastructure⁴¹. It was in equipping *schools* and *teachers* rather than children that the educational changes envisaged in Stevenson were to be achieved.

One proposal in the Stevenson Report was the exploitation of the potential for technologies to operate as a link between school and home, and to enable the reconfiguration of the home as a site for formal learning. The proposal in Stevenson to offer all children over the age of 9 an individual email address was connected with this objective as it was intended to enable children to access information and communicate with others from wherever they might be at the

Digital Curriculum that we could begin to see any significant state intervention in the software arena.

³⁶ NGFL (National Grid for Learning)

³⁷ The BETT (British Educational Technology Trade) Show, held at Olympia each year in January, is run by EMAP and brings together hundreds of suppliers of education and technology, with thousands of teachers, policy makers, advisors and consultants attending. Keynotes are often given by senior ministers and academics, and these are sponsored by commercial companies, national newspapers and teaching magazines.

³⁸ New Opportunities Fund (NOF) training for teachers was funded by the National Lottery with suppliers having to bid for contracts to carry out the training. This resulted in a wide diversity of different training practices across the country.

³⁹ National Council for Educational Technology (NCET)

⁴⁰ British Educational Communications and Technology Agency (BECTA)

⁴¹ Interestingly, the DFES's flagship 'Building Schools for the Future' programme which is intended to create 'future schools' through the best in ICT, design and engineering, was originally established without any educational advisors in the organisation. Instead, it was run by architects, engineers and accountants – only since 2005 have educators or teachers been brought in to advise and shape the programme. It could be argued that this is a reflection of the conception that the interactions and processes that characterise education will be unchanged, but simply 'enhanced' and made more 'efficient' through the introduction of digital technologies.

time. This proposal is premised upon the commonsense assumption that children would want to access educational resources across these different sites:

the rising numbers of computers in the home [will] enable students to access the same set of educational resources, whether from school, home or a library [...] (Stevenson, 1997, p27)

This idea of the NGFL as a vast 'web' of resources which children could access became the dominant metaphor for the project. A metaphor which serves to produce an equivalence between education and 'access to information'. Indeed, it is in these terms that Blair constructs it in the introduction to the 'Connecting the Learning Society' consultation document.

The Grid will be a way of finding and using on-line learning and teaching materials (DFEE, 1997)

As the policy develops towards the late 1990s, so is there increasing emphasis upon the role of parents and the home; parents are conceived as providers of hardware and software, and as formal educators. Parents are expected, for example 'to ensure that all children are ready to start learning when they start school' and Blunkett argues that:

IT can become an effective means of building stronger bridges between home and school. It can be used to encourage parents to learn with their children and support their children's learning. (Blunkett, 1999)

By 2001, over £1bn of public monies had been spent on teacher training, on the provision of hardware and network infrastructure in schools, and on credits to allow schools to purchase software. At the same time, several million pounds was also being spent on the provision of computers to low income communities to enable children to access computers and learning resources in the home⁴², while a

⁴² The ill-fated 'Kensington' scheme in Liverpool saw the government spend over £1m on the provision of computers to low-income families in the area. However, these families had not been consulted on whether or if they would like computers and how they might use them, as a result most of the computers were sold by the families to raise extra income. This was the end of the government's initial attempts to 'bring the school into the home' through the provision of computers, although it should be acknowledged that the interest in recent years in handheld computing has seen many of these earlier hopes revive, and government is increasingly interested in exploring the provision of such smaller items of equipment as a means of extending schooling into the home.

national infrastructure of computing facilities in the form of City Learning Centres, Community Online Centres and Libraries were being established to enable children to access the NGFL outside the school. The commonsense articulation of the home with education via the use of technologies was being translated from the discursive field to the field of material and institutional social practices.

What is not evident from this account, however, is the extent to which the articulation of schooling with home, and of education with 'basic skills' were contested; nor does it highlight the extent to which such new articulations potentially challenged and problematised the dominant framework of childhood and the institutions which supported it. In the next section I outline how these articulations were produced through contestation rather than consensus, and the potential 'gaps' and 'delocations' that this contestation produces within the process of articulating these different elements.

5.5 Contested articulations of children and 'the information society'

Let's return to some of the assumptions upon which the Stevenson Report and Blair's vision for education and technology were premised. The first of these was a paradoxical 'double vision' relating to digital technologies and their impact on society and economics. In the first instance, these technologies were presented as causal of significant socio-economic and cultural change, they were identified as the causal features of a new 'information society' that required radical transformation in all areas of life. At the same time, however, this potentially destabilising and disruptive force was presented as, effectively, an 'efficiency tool' that could be harnessed relatively unproblematically for educational purposes. The analogy of new technologies with electricity, for example, produces the idea of technology simply as a delivery mechanism, as a neutral tool that can be harnessed for whatever ends it might be required. Based on this premise, the role of technology should not be destabilising, but enhancing, would not require a shift in the relations between social elements, but would instead, as it were, simply grease the wheels of the existing practices.

As we know from the history of the introduction of electricity (Marvin, 1997), however, such technologies are rarely introduced into society in such a way that

they have the effect simply of 'making things more efficient'. Indeed, during the 97-01 period numerous commentators, mainly from the academic field, were arguing that digital technologies could be instrumental in radically changing the ways in which children learn (e.g. Papert, 1993; 1996). At the same time, other commentators were arguing that the prevalence of digital technologies in society had implications not only for learning processes but for the very goals of education (Green and Bigum, 1993; Lankshear and Snyder, 2000; Snyder, 1998). Rather than simply rendering education more efficient, these commentators argued, technologies would play a role in fundamentally transforming the goals of education and the relations between adults and children within education. For example, the RSA⁴³, in their publication 'Opening Minds', argued for complete rethink of educational goals; they argued that the 'new basics' of the curriculum should comprise the development of certain core competencies such as 'learning to learn' rather than the acquisition of factual knowledge. At the same time, the OECD⁴⁴ presented their 'future scenarios' for education, which argued for a radical rethink (and possible abolition) of the school in the age of information technologies.

Just as Blair's educational vision was premised upon the assumption that potential unruly technologies could be harnessed for education without significant transformative effects, so too was it premised upon the assumption that children could be understood primarily as educational subjects, and that their interactions with digital technologies could and would be constrained to that domain. The child, in Blair's speech, is understood as an empty cipher into which 'learning' can be poured via the new technologies:

[165] What matters in the end though, is the educational material that comes down those cables, into those computers and into the mind of the child (Blair, 1996)

In contrast, academic commentators were arguing that children had a profoundly different and more active role in relation to digital technologies. From Papert's assertion that children 'across the world are entering a passionate and enduring love affair with the computer', to Green and Bigum's (1993) suggestion that children

⁴³ Royal Society for the Encouragement of Arts, Manufacture and Commerce (RSA)

⁴⁴ Organisation for Economic Co-operation and Development (OECD)

were occupying a new 'socio-technical sphere' at the intersection of global media and communications technologies, there were calls to understand the relationship between children and technologies as far from passive. Essentially, these commentators argued that we needed to view children as actively creating new ways of living and learning with these resources that were frequently in conflict with the practices and goals of traditional education. The concerns of the period with children's use of computer games, moreover, shifted these arguments into the public sphere and constructed children's relationship with digital technologies as potentially difficult to manage (Buckingham, 2000).

The introduction of discourses of radical socio-technical change which underpin both Blair's speech and the Stevenson document, therefore, open up the potential for a challenge to the articulation of digital technologies with existing educational goals and existing adult/child relations.

What is notable from the analysis of New Labour discourse, however, is the limited success such arguments had in attaining the mainstream of political discourse and strategy at this period. Instead, we see technology and educational practice articulated together at this period in a way which explicitly protected against such potential transformations and disruptions.

In order to understand this we need both to understand the ways in which the media reacted to the NGFL proposals (which I will discuss in the next chapter) and also to take a short detour into the wider network of New Labour policies and texts running up to and during the 1997 election. At the time of the 1997 contest, Labour had succeeded in losing 4 elections to the Conservatives and were at this time challenging for government on the basis of having taken over much of the centre ground of British politics. Right in the heart of the 'centre ground' of politics in this period was John Major's renewed commitment to the '3Rs', or the 'basics' of education. Labour, rather than producing an alternative vision of education, took the battle to the Conservatives with a claim to be even more committed than they were to these basics. The key distinctions between the Conservatives and New Labour in education terms, were 1) Labour's commitment

raising standards in the basics for *all* children⁴⁵ and 2) their commitment to modernising and investing in Britain's schools rather than, as they suggested at the time, privatising education for the benefits of a minority.

In this context, new technologies could be seen as a justification for educational investment, and a means of modernising educational practices, but they could not be allowed to be seen to be challenging accepted wisdom about the fundamental goals of education. While wishing to capitalise upon the symbolism of new technologies as a means of heralding their 'modernisation' agenda, then, New Labour had to find ways of colonising the potential wider impacts of digital technologies within the discourses of the raising standards 'basics' agenda⁴⁶ in order to retain the allegiance of the different wings of the labour party (Hartley, 2003).

The simplest and most commonly repeated strategy for achieving this colonisation of potentially disruptive new elements was to produce the relationship between children and technologies outside the educational arena as a potential threat to the 'common values' of childhood, (namely, in most New Labour documents, the acquisition of numeracy and literacy). For example, in New Labour's 1995 publication 'Excellence for Everyone: Labour's Crusade to Raise Standards', we witness semantic gymnastics in the attempt to corral children's digital technology use within the goals of New Labour educational policy:

We recognise, however, that the ability to read and master numeracy without the aid of computers is crucial if we are not to have alienated young people captured by technology but ill-prepared to participate, communicate and relate to those around them. Socialising and communicating are important skills which must

⁴⁵ The New Labour strategies of 1997 were clearly a continuation of rather than a break from earlier Labour Party strategies. For example, in 1992, Labour published a document 'Modernising Britain's Schools'. In this text there is no mention of digital technologies in the classroom other than a commitment that 'technology' should become one of the core subjects in schools. Of the 17 photographs in the publication, there are no images of computers; the front cover shows a teenage girl holding ring binders and the inside photographs show teachers in front of classes of children working with blackboards and textbooks. The major commitments to modernisation in schools are focused on 'books for every child' and school repairs. The key policy commitments focus on raising standards for all children (in contrast with the perception of Conservative education policy as divisive and elitist). Raising standards, and creating an educational system of benefit to all children are the central themes of this text (Labour Party, 1992).

⁴⁶ This tradition continues today: if we look at the recent DFES 'e-strategy' (2005), this is titled 'Harnessing Technology', a title which maintains the tradition of presenting technologies not as potentially transformative of education, but as ultimately subservient to existing and long-standing educational goals.

not be lost in our drive to equip young people to deal with the challenges of new technology. (Labour Party, 1995, p14)

The text creates a set of equivalences and presents these as common-sense assumptions ('we recognise') about the relationship between children, technology and education. On the one hand, it constructs an equivalence between children 'captured' by technology, and 'ill-prepared for' and 'alienated' from the world around them. In opposition to this it posits sociable and communicative children able to participate, communicate and socialise with those around them. The anchor for these statements, the pivot, if you like, which determines which of these routes children will take, is the question of whether children will be able to master literacy and numeracy without computers. It is worth acknowledging that these concerns over computers 'de-socialising' young people could have been acknowledged without the references to numeracy and literacy – that these two issues are yoked together suggests an active desire to manage the potentially revolutionary implications of the increasing prevalence of digital technologies through an appeal to common-sense views of what constitutes a 'rounded' childhood.

This paragraph, moreover, firmly lays a claim to adult ownership of the 'information revolution': it positions all adults ('our drive to equip young people') as able to determine exactly the skills and competencies (in this case traditional numeracy and literacy) required to enable young people to take their place and 'deal with the challenges' of the information revolution. Effectively, what this text produces is an unease and concern about any relations between children and technology that might occur outside the goals and practices of formal education. The effort and work that goes into producing this relationship however, its excessive over-determination of childhood and technology as problematic, suggests that this interpretation of children and technology's relationship remains contested.

A related pattern is evident in Blair's 1999 'E-Commerce' speech to the CBI. In this speech, Blair equates allowing people to 'fend for themselves' in terms of the use of digital technologies, with the development of an 'information underclass':

I understand those fears. But we can't turn our backs on change. If we do, the world will not wait for us, it will overtake us. Of course one response would be to let people fend for themselves. We cannot let that happen. We cannot tolerate

the creation of an information underclass. It would be both unfair and inefficient. (Blair, 1999b – Knowledge Economy Speech)

This statement, however, comes after a long discussion of the potential of children to manage technologies very well for themselves:

I know that for many people, this is a frightening vision. They feel left out by new technology, threatened by a younger generation who have grown up on-line. To say the least, I am no expert. I watch my children and indeed Cherie surfing the net and feel a mild, sometimes not so mild, sense of humiliation. Like many people of my generation in positions of leadership, I rarely use a computer and when I do, I usually need help. But I know its not good enough and if I recommend lifelong learning to others, then I know I should go back to school myself. I started over the summer, taking my first lesson with Cherie. But I intend to go one step further, and do a course. (Blair, 1999b)

Children in this discourse are thereby constructed in an ambivalent relationship with these technologies – while they are presented as a universal ‘younger generation who have grown up on-line’, they are also potentially at risk of falling behind; the management of this ambivalence is achieved discursively through recourse to traditional educational practices.

At the same time, the New Labour discourse of this period also attempts to manage uncertainties around the relationships between adults and children in the age of digital technologies. The potentially destabilising capacities of technologies, specifically children’s interactions with them, are carefully managed and worked on in New Labour texts, in this case by reinforcing the role of teachers:

Teachers will be crucial in bringing about such a fundamental change [...] A successful strategy for the development of IT in schools must put teachers – and the skilling of teachers at the heart of the programme. [...] We want to ensure that teachers will in the future be computer literate and that they never again have to ask their own pupils how to operate basic computer equipment. (Blunkett, 1997)

The expert child is presented in this text as a problem to be solved. Its solution will be achieved not by a radical rethink of educational and adult/child relations as proposed by academic research of the period, but by a reproduction and reinforcement of the primacy of the teacher in the educational domain. And the

'fundamental change' to schooling which is envisaged? Again, we see the technologies being harnessed to the pre-existing educational goals of Labour strategy, the acquisition of basic skills and preparation for the workplace:

If we are successful in facing this challenge the school of the future will be fundamentally different to the learning of the past. IT will become an aid to teaching not a substitute for it, with basic skills learnt at the earliest possible stage and technology enhancing opportunities for accessing information, for sharing resources and good practice [amongst teachers] and for preparing for employment in the 21st Century. (Blunkett, 1997)

The question of how knowledge and learning might change through the introduction of technologies or a changed socio-technical landscape is, however, a significant subject of debate within New Labour at this period. Indeed, in the mid 1990s a battle between the DCMS, DTI⁴⁷ and the DFES⁴⁸ emerged in which the 'meaning' of the information society for education was contested. Where in Blair's speech and in Stevenson, the forces of change represented by digital technologies were articulated with pre-existing educational goals, in the DTI and DCMS⁴⁹ led discourses of the period (notably the 'All our futures' publication from the NACCCE⁵⁰) the 'information society' was seen as requiring a shift in pedagogic practice that was premised on the idea of children as active and creative producers with technologies (Hartley, 2003). Centrally, this focused on the need for schools to produce 'self-generative' workers, able to act creatively in and on the world.

This potentially disruptive element, however, is constrained in education policy (particularly OFSTED⁵¹'s inspections) and in Blair's speeches, within the pre-existing discourses of basic skills, opportunity for all and, specifically, the pre-existing classification and framing of knowledge within the subject based national curriculum. For example, Blair, in his Romanes lecture at Oxford in 1999, concedes that a changing techno-social landscape may require changing educational priorities:

Singapore, with academic results among the highest in the world, recently appointed a commission to report on education for the 21st century. It concluded that education needed to go beyond skill acquisition 'to instill qualities such as

⁴⁷ Department for Trade and Industry (DTI)

⁴⁸ Department for Education and Skills (DFES)

⁴⁹ Department for Culture, Media and Sport (DCMS)

⁵⁰ The National Advisory Committee on Creative and Cultural Education report 'All Our Futures: Creativity, Culture and Education'. See: <http://www.dfes.gov.uk/naccce/index1.shtml>

⁵¹ Office for Standards in Education (OFSTED)

*curiosity, creativity, enterprise, leadership, teamwork and perseverance',
developing young people in the 'moral, social, physical and aesthetic domains'
(Blair, 1999b)*

The response offered to this 'need', however, is framed within the existing content based subject curriculum. Blair responds to this challenge in the speech by emphasising that children will learn citizenship, languages and do sports and music. And, importantly, they will do none of these before acquiring 'the basics' at primary level.

*The nation's most basic educational objective of all – ensuring that all our
young people are literate and numerate. Once we have got the basics right, we
develop the skills and talents of all our young people to the full (Blair, 1999b)*

Hartley (2003) argues that this is a debate which is resolved primarily around questions of finance, arguing that the investment that would be needed to develop 'child-centred' educational approaches would be prohibitive. While his article usefully problematises the idea that 'New Labour' can be understood as coherent political movement, his interpretation of economic considerations as being the underpinning concerns in debates over pedagogy is, I would argue, simplistic. As a counter to this I would argue, first, that expense has never been a strong point in New Labour's thinking about technology (consider, for example, the fiasco of the £40m Online University) and second, that debates over pedagogy go much deeper than finance, and are fundamentally related to underpinning assumptions about the relations between children and adults in schooling and the question of who such schooling is 'for'.

Throughout the discourses of New Labour at this period are repeated references to 'All' children, 'every' child, 'all our children' as distinguished from the 'some' children that the conservative party was thought to favour. Could it be that in emphasising 'the basics', New Labour was attempting to recentre the debate in education around the majority, rather than the 'minority'? In so doing, however, it establishes schools as sites for the production of 'operative workers', the 'old hands on the factory floor', rather than the 'self-generative workers' others, particularly the DTI, have argued children will need to become to survive *well* in the information age.

Rather than acting as a hegemonic discourse, it is possible to consider the idea of the 'information society' as, instead, a floating signifier whose meaning, and whose articulation to different political projects, is far from stabilised in the discourses of this period. Whether the discourses of the 'information society' will be produced in relations of equivalence with 'education for all/basics/teacher control' or with 'new basics/the child at the centre/self-generative learners', is far from assured for the actors involved.

5.6 Summary

In the political field in these early days of New Labour we could say we were witnessing a hegemonic struggle to articulate discourses of childhood and the information society with different educational agendas. Centrally, however, this analysis identifies the limits of attempts to achieve rhetorical closure around these new articulations. Throughout this period the discourse of New Labour has to work hard to balance two paradoxical relationships between children and technologies: 1) on the one hand, the image of the 'natural child computer user'; on the other, the need to invest in the child for the sake of their competence in the 'information age'; 2) on the one hand, technologies as causal of significant social change; on the other, technologies as efficiency tools for the achievement of traditional educational goals.

One reason for the emergence of this first paradox is arguably the absence of an explanatory logic in New Labour discourse that would make visible the different relationships with digital technologies of different children. The assumption of commonality of experience between Blair and all parents, the presentation of all children as 'natural computer users', is a fundamentally ideological articulation which obscures the multiple and different realities of children's lived experiences of the 'information age'. If there is no explanation of the socio-economic conditions which structure access and use of digital technologies, no account of different childhood experiences and differential access to resources, then a profound paradox in ideas of the child computer user is necessarily generated which presents all children as both natural computer users and as in need of support and intervention.

This paradox could be tackled through an explicit discussion of questions of different social, economic and cultural resources offered to children in the home, and by an awareness of difference in childhoods. To do so, however, would be to require the state to play a role in equalising opportunity outside the school, a role which has been renounced in 'third wave' educational philosophies which place responsibility for ensuring educational success upon parents and individuals rather than the state (Brown, 1997). In a 'parentocracy', the state is responsible for ensuring standards of provision, and the parent responsible for ensuring the child achieves these standards.

Instead, this paradox is resolved in New Labour discourses by side-stepping questions of children's differential experience of digital technologies outside school, by generating a policy emphasis on the provision of access to digital technologies not for children, but for teachers. This emphasis also serves to overcome the second paradox, by viewing digital technologies as tools to support existing teaching practice and educational goals, rather than as potentially disruptive of these practices. The teacher as user of digital technologies, and the state as provider of educational platforms become the twin focus in these educational agendas.

This focus on 'modernisation' of the school, and on the 'upskilling' of the teacher enables New Labour to both fight the Conservatives on the battleground of commonsense ideas of childhood, and to articulate the potential antagonisms of the different wings of the Labour Party. What it does not do, however, is offer an explanatory account of how different children might benefit differently from the introduction of digital technologies into schools and homes; nor does it offer an account of how relationships between children and teachers might be transformed or changed in the context of the uses of digital technologies. As such it serves to create consensus only for financial investment in hardware and software in schools and homes, but fails to offer a reasoned argument for how this investment might impact differently on different groups in society.

These policy texts are, however, only one site of the public production of childhood at this period; the extent to which these discourses are stabilised is

dependent not only upon the practices initiated and established in the policy field, but upon the extent to which these ideas become 'commonsensical' in the field of public debate and in the practices of the family. The next chapter will explore how these debates were enacted in media discourse of this period and explore how this field recontextualised, colonised or appropriated the articulations produced within the political domain.

6 Ideas of childhood and technology in the print media field 1997-2001

6.1 Introduction

This chapter provides a cumulative analysis of the representations of children and technologies in the articles of national newspapers in the years 1997 and 2001. It examines the representations of children which come to act as 'commonsense' or shorthand resources for journalists by exploring the synonyms and collocations for 'childhood' in these texts; it combines this corpus analysis with a detailed textual analysis of particular 'chains' of texts; specifically, the chain of texts relating to the presentation in 1997 of the National Grid for Learning discussed in the previous chapter, and the cluster of texts relating to concerns over 'Internet paedophilia' in 2001. The analysis also includes a discussion of the role of the media in constructing new representations of the 'ideal techno-family' and the ways in which these representations prevented the easy articulation of the home with educational practices as envisaged in New Labour discourse. The focus for the analysis is also upon the different social groups that were articulated together in struggles over the meaning of childhood at this period, exploring in particular, the ways in which these blocs were formed across traditional 'left/right' lines to create new allegiances between groups which would historically be understood as fundamentally opposed.

6.2 The media field

While it would be foolish to attempt to present a 'single theory of the media [...] Indeed it would be a terrible mistake to try to find one' (Silverstone, 1999:5), nonetheless, media research over the last thirty years has identified two elements of media practice which function as recontextualising principles for discourses of childhood: the 'moral panic' and the 'production of commonsense'.

Many researchers have identified the ways in which the media tends to recontextualise children's lived experiences within the context of 'moral panics' (Cohen, 1972). In Cohen's original description of these phenomena, these are described as follows:

Societies appear to be subject, every now and then, to periods of moral panic. A condition, episode, person or group of persons emerges to become defined as a threat to societal values and interests; its nature is presented in a stylised and stereotypical fashion by the mass media; the moral barricades are manned by editors, bishops, politicians and other right-thinking people; socially accredited experts pronounce their diagnoses and solutions; ways of coping are evolved or (more often) resorted to; the condition then disappears, submerges or deteriorates and becomes more visible (Cohen, 1972)

These moral panics are focused upon managing cultural strain and ambiguity caused by social change by identifying 'folk devils' (such as new technologies, 'deviant' groups of young people, phenomena such as 'mugging') upon which such anxieties can be pinned, by comparing the 'present state of affairs' with a nostalgic recall of a 'golden age', and by agents of social control, such as the police, 'amplifying' anxieties about social phenomena (Hunt, 1997). They are understood as 'a form of ideological cohesion which draws on a complex language of nostalgia' (McRobbie, 1995). In Hall's terms, 'moral panics' can be understood as hegemonic articulations of meaning and social formations: *Policing the Crisis* (Hall et al, 1979) for example, was instrumental in demonstrating that moral panics served to create the social conditions for consent for changes in the underlying principles of policing and law and order in society.

The 'moral panic' has been used as a term to describe significant social scares about childhood and new leisure technologies (cinema and comics for example) dating back to the nineteenth century (Pearson, 1983; Barker, 1989 & 1997). Recent commentators (Buckingham, 2000; Prout, 2005) have identified two dominant media narratives of children's relationship with technologies presented in the media, naming these the 'cyber-critic' or 'cyber-utopian' responses. These two positions view children either as dupes and victims of new media technologies (cyber-critic) or as the heralds and leaders of a revolution in this area (cyber-utopian), and as such could be seen within the traditional oppositional positions of a 'moral panic'.

Hall's analysis, which centred on the role of dominant state interests in the creation of moral panics has since been developed by McRobbie (1995) who argues that, in the complex media landscape of today, we need to consider moral panics as

emerging through 'many voices', from interest groups, pressure groups and campaigning experts to commercial organisations, keen to 'whip up' moral panics as a marketing tool for their products. McRobbie critiques the notion of the 'moral panic' as simply emerging from nowhere, and instead argues that these sudden flurries of concern can be understood as simply the 'front line' of an ongoing ideological debate in which newspapers are engaged in an 'ongoing daily process of reaching out to win consent through endlessly defining and redefining social questions' (McRobbie, 1995: 565). Indeed, she argues, this process of identifying sites for moral concern is now embedded in everyday practices of the media:

As the British press becomes more competitive, one strategy for maintaining healthy circulation figures is for a newspaper to cast itself in the role of moral guardian, ever alert to new possibilities for concern and indignation. It would seem that professional journalistic style, carefully attuned to the popularity of 'human interest' stories, draws on a moralistic voice which, for the purposes of variety, it is willing to undercut with occasional irony, jokes etc. (McRobbie, 1995: 570)

Indeed, Silverstone argues against a focus solely upon the 'spectacular' and 'pathological' elements of media representations as evidenced in earlier 'moral panic' studies, and instead suggests that we understand the ways in which the daily processes of media work to generate 'touchstones, references for the conduct of everyday life' (Silverstone, 1999):

...continuous attention to the exceptional provokes inevitable misreadings. For the media are, if nothing else, daily.[...] It is in the mundane world that the media operate most significantly' (Silverstone, 1999:6)

In this light of sensitivity to the ongoing and daily production of meanings, Selwyn's (2003) analysis of representations of children's interactions with technologies generates six key narratives which are understood to 'filter' representations of children, these are:

- *Children as 'naturally adept users of technology'*
- *Information transforming ordinary children into exceptionally skilled ones (by somehow boosting, for example, their reading and maths skills)*
- *Computers transforming children so that they become adept at 'adult' activities (such as running businesses or dealing in stocks and shares)*
- *Deviant children who seek out 'adult' material on the Internet or through computer games*

- *Innocent children who are exposed to inappropriate violent or sexual material through their use of information technology*
- *Children's need to use IT because it will fit them for the information society and network economy*
(summarised in Prout, 2005:119-120)

My interest in this analysis is in the principles in operation in the newspaper field in relation to the construction of representations of childhood. It pays attention to the resources which are drawn on in the construction of such representations (which elements of 'real life' are selected as elements for potential articulation); it focuses on the articulations created between children and other social elements through these texts; and it focuses on the narratives which act as organising principles through which these processes of selection and articulation are managed.

The analysis focuses on a total of 997 articles selected from the years 1997 and 2001 by means of searches on the Lexis Nexis database for the search terms 'children +/- computers +/- digital technologies +/- Internet' (see Appendix 2 for search and selection process). The article details are summarised below:

Search Name	Year	Articles	Word Count	Occurrence of 'children'
1.Children Computers Digital Technologies Internet	1997	334	215,112	1000
2.Children Computers Digital Technologies Internet	2001	663	365,259	2583

Table 6-1: Summary of Newspaper Articles Consulted 1997-2001⁵²

6.3 News events and patterns of articles

What, then, were the resources that were drawn on in the texts of this period in the representations of childhood? The tables below (Table 6-3, Table 6-4) give an insight into the seemingly diverse range of sources and events that the newspaper field drew upon in this period. These include accounts of legal actions in the US Supreme Court, press releases from commercial companies, academic research

⁵² I cannot guarantee that all articles relating to children and technology have been included in this search as the formula which underpins the Lexis Nexis database is not public and so it is impossible to be certain precisely how these articles are selected. The figures in this chapter should be seen therefore as providing an 'overview' of the field, in the form of Chouliaraki and Fairclough's 'charcoal sketch', rather than being taken as definitive reliable figures for the purposes of statistical analysis. The figures are treated in this way throughout the analysis and no statistical modelling of the figures has therefore been conducted.

reports, government announcements, local court cases, and scholarly or popular books. In themselves, this diversity of sources construct 'Childhood' in the late 1990s as implicated in a complex and far-reaching configuration of social practices. Children are articulated to the practices of the law, of medical and social science research, of schooling and government and the telecommunications and technology industries. In this context, it becomes clear that the attempts to articulate school-child-technology-home within an educational context by the New Labour government, have to contend in this field with multiple alternative and overlapping articulations.

Significant news events in which children are foregrounded in 1997 include: the May 1997 General Election and the government's proposals for the National Grid for Learning; the invention of 'surveillance tools' to enable families to observe children at a distance; various reports on the impact of games play upon children's health; the US Supreme court case examining the limits on free speech (and pornography) on the Internet; Princess Anne's speech on technology and education; the 'tamagotchi' craze; smart cards to monitor children's attendance and eating habits at school; Todd Oppenheimer's critique of technology in education; projects to enable children to access computers outside school and the changing role of schools as 'community hubs'.

In 2001 the picture is slightly different, the year is dominated by concerns over paedophilia and the role of the Internet in opening up children to the risk of 'grooming'. The news events of the year include the trial and sentencing of the 'Wonderland' child pornography gang; Carol Vorderman's crusade to 'clean up the Internet'; the debate over the Kilshaw 'Internet baby' adoption case; concerns over a 'digital divide'; the establishment of new approaches to policing the Internet and new laws against grooming on the web; Chris Morris' Brass Eye Paedophilia parody on Channel 4; and a number of reports suggesting technology use is increasing children's IQ.

These news events provide the 'landscape features' of the coverage of this period, however, they belie the overall contours of newspaper coverage of children and technologies, which is often mundane and regularised in weekly repeated features

such as consumer round-ups or opinion articles. Table 6-2⁵³ provides an overall summary of the types of subjects which the articles in 1997 and 2001 covered in relation to children and technologies:

Subject	1997	2001
Games	42	65
Children's Health	24	65
Cyberporn/regulation and paedophilia	46	276
Technology and the family	60	100
Consumer Advice	83	104
Government policy on children and technology	40	32

Table 6-2: Themes in Newspaper Coverage 1997 & 2001

⁵³ These themes were identified through a reading of all texts and a categorisation within emerging themes.

January:	Jack Sanger – academic research study into home use of computers and games
	Blunkett speech to BETT arguing for use of games consoles to access educational software
	Schools to offer 'smart cards' to pupils to allow parents to monitor children's school meals
	The Net TV programme profiles scheme to enable children to play computer games in hospitals as part of therapy
	Launch of Microsoft/DFES 'election' website
	Brighton 'cyber café' babysitting service for shoppers
	Project to give inner city children laptops to help with education
	Teletext relaunch educational services
	Launch of ID Card security system for school children
	Study by ChildWise Winter Monitor of children's media habits
	Bill Clinton State of the Union address presents education as a 'national security issue'
February	Michael Howard Home Secretary announces plans to clamp down on 'superpredators', young children engaging in repeated criminal behaviour
	Apple launches Powerbook
	University of Aberdeen study into children's health and impact of computers and computer games
	Sony and Nintendo games console battle begins with price cuts by Sony
March	New research suggests computers can be used to map children's experiences and emotional 'landscape' in abuse cases
	New figures released on children's obesity and lack of fitness
	Review of Douglas Rushkoff's 'children of chaos' – concept of 'screenagers'
	US Supreme Court Cyberporn case
	Launch of Stevenson Report
	Halifax report on children's spending patterns
	Nielsen Media research into children's media habits
	Launch of Labour and Conservative election manifestos
	German case rules on cyberporn and role of filtering software
	Launch of US website enabling kids to dissect frogs online
April	Oklahoma bombing trial starts, looks at role of Internet
	Public Accounts Committee calls for preparations to tackle Millennium Bug
	Launch of Kindercam web cam feeding pictures from nurseries to parents
	IPPR promotes proposals for University for Industry
May	Labour wins General Election
	Heppell promotes Stevenson proposals and Schools On-line
	Microsoft/Kent project to link schools and communities via 'The Hub'
	Murder of Japanese schoolchild linked with computer games violence
	National Trust goes online
June	Microsoft Survey of teenagers attitudes to computers and games (NOP poll)
	David Hargreaves publishes future vision of education in future without schools using computers in the home
	Videoconferencing roadshow sees over 800 orders for technology by schools
	Conclusion of Cyberporn Court Case in US
	Use of calculators and computers questioned in Scottish Survey of maths and science skills
	Report on children's back problems as a result of computer games
	US Cyberporn case blocks ban on indecent material on the Internet
July	Hong Kong handover to China
	Medical study on radiation risk from playing computer games
	Croydon links secondary schools and libraries to Internet with \$200m Microsoft backing
	Derbyshire sets up first 'Cyberschool' for hospitalised children
	Internet Watch Foundation proposes certifying websites with '18 certificates'
	Heppell criticises govt interpretations of NGFL
	Todd Oppenheimer uses US example to argue against ICT in schools

July (cont'd)	Wired 'Long Boom'
	Papert 'The Connected Family' (rewrite of 'the children's machine')
	Research suggests 'crystals' can fend off radiation from technology
	Pilot scheme to get lone parents accessing Internet and job opportunities launched
	Dearing report envisages future of high debt and laptops for students
	Research Business International report on resurgence of traditional games in families in response to computers and TV
	BEON project launches in Bristol
August	German couple on trial for using Internet to offer children for torture
	American survey suggests computer users increase school grades
	Olivetti survey reports 2/3 households with children own a computer
September:	Halifax survey on home computer and TV ownership
	Manchester Met University report on Lara Croft says games associate sex with violence
	Blair sets 2000 as deadline for all schools to have Internet access and launches Dome as an Internet/educational experience
	UCLA report on gender divisions in computer access and ownership
	Gateway funded research report on children and adults attitudes to computers
	Princess Diana dies
October	BT deal to network all schools agreed
	£1.5m ad campaign for teacher recruitment launched
	National Back Pain association says children's backs damaged by computers and books
	Prime Minister launches NGFL £100m to purchase computers and access software
	Prime Minister meets Bill Gates to discuss technology in education
	Bill Gates lecture in Oxford suggests teachers as important as technology
	Princess Anne speech to head teachers to emphasise teaching and social skills not technology
	NASUWT report on teacher workloads and concerns over parental involvement
	The British and Technology Report MORI/Motorola – raises concerns over digital divide
	Wired: Mitch Resnick 'Building a Learning Society'
	Loyalist and Republican teenagers in NI using league tables on video games in arcades to 'fight' each other
November:	Mark Griffiths report 'Computer Games are Good for You'
	DCMS commit to future of public libraries having central role in information age
	Body Action Campaign report highlights RSI risks for children
	Yahoo launched on UK stock market
	Saatchi and Saatchi report on children's influence over family budget
	ONS survey highlights digital divide
December:	JC Herz 'Joystick Nation' published and reviewed
	Packard Bell 'research' shows computer owners to be clever people and computers bring families together
	Seven children taken into care because 'parents are hooked on Internet'
	US 'summit' on children and the Internet
	Early stories on UK Net Year (1998)
	Children talk to astronauts via web link from school
	Mark Griffiths 'Internet Addiction' research report
	NOP poll for BT on fathers bonding with children through PC
	Report on 'anti-basics' teaching with computers allowing kids to publish on Internet but not correcting basics.
	Journal of Applied Developmental Psychology argues computer games increase IQ and help concentration, problem solving and visualisation
	ELSPA launches 'voluntary age rating' scheme for games

Table 6-3: Key News Events 1997

January	13 police forces arrest network of paedophiles in largest ever operation against Internet child pornography
	George W Bush elected President of the United States
	Kilshaw adoption case via Internet 'Internet babies'
	Post Office announces pay as you go Internet cards for teenagers
	IPPR launches proposal for Internet 'proficiency' test – L plates for Internet access
	Survey of 900 children by Abbey National Bank shows more knowledge of Internet than politics
February	Birmingham LEA announces plans for video-conferencing to combat teacher shortage
	15 year old girl missing after meeting man on Internet
	Sentencing of Wonderland Internet paedophile gang
	15 year old girl found again and will not be allowed to surf web unsupervised again
	Home Office considers revision of law on entrapment to allow police officers to pose as children on web to lure paedophiles
	Smart cards allowing children to shop online launched
	News of the World launches campaign headed by Carol Vorderman to tackle child pornography on Internet and to protect children 'Sarah's Campaign'
	Demon Internet service provider blocks child porn sites
	Carol Vorderman 'ITV programme on child porn on Internet'
	Government Green Paper on 'modernising secondary schools'
March	National census report on children's lives and interests
	MP Paul Burstow announces in PMQs that 1/5 children have been approached by paedophiles. PM/Home Office/Jack Straw agree to outline plans for preventing grooming
	Announcement by BBC of Digital Curriculum
	David Blunkett announces measures to 'safeguard pupils online at school' alongside Carol Vorderman – 'computer code of conduct'
	Videoconferencing technology used to link first 'federation' of state schools
	'Internet Crime Forum's 'Chat Wise, Street Wise' study – offers guidance to parents on supervising children's Internet use – suggesting monitoring by police, giving official kitemarks and rules for parents
	Survey by the Family Assurance Friendly Society shows that parents now manage children's behaviour by banning access to computers
	National Children's Home Charity calls for access to computers for disadvantaged children – digital divide concerns
	Michael Jackson launches charity to bring children closer to parents
	E-learning Foundation launches with aim of giving all children access to a computer
	Government launches 'wired up communities' initiative to give access to Internet to poorest communities
	'Childnet International charity launches websites to encourage parents to educate children about potential dangers of Internet chat rooms
April	Lib Dem MP Paul Burstow admits error in 1/5 figure used at PMQs
	Blunkett launches Curriculum Online and plan for teaching via digital television.
	Schools put homework requirements and reports online for parents to access at home – the Pupil Performance Monitoring Scheme
	Launch of 'Black & White' computer game
	HSBC funds Thomas Telford School to develop online maths courses
	£25m National High Tech Crime Unit launched to combat crime on the Internet
	Report on pre-school computer games play by young children
	Children learning Swahili via Internet link with Kenya
	American Psychological Society report that IQ scores are rising through use of Internet and computers
	Home Office research suggests computer games players more likely to succeed in education and careers
May	Teenage boy tries to commit suicide after text bullying
	computer retailers and Microsoft join forces with police and Internet charities to fit filtering software and introduce kite marks for child-friendly chat rooms

	Orange launch their 'house of the future'
	task force to tackle grooming on Internet launched by Home Office
	proposal for 'anti-grooming order' – new law
	Japanese survey on teenagers reliance on mobile phones
	'NetValue' researchers identify 1/5 children accessing porn sites
	US supreme court agrees to revisit cyberporn law
	Teenagers set up own website 'Britain's biggest teen website'
June	Families of Columbine High School victims launch lawsuit against Eidos computer games company
	Campaign launched against manufacturers of Mobile Phones over radiation concerns
	Lancaster University study argues fathers play significant role in parenting through activities such as using computers in the home
	Globalclub launched in Dublin – Internet project run by kids
	LSE report suggesting British children addicted to television
July	Neilson research group report children's use of Internet
	Coronation Street Internet grooming story aired on ITV
	News of World launches 'Chat Wise, Street Wise' desktop to offer advice on using Internet safely
	Michael Lewis 'the future just happened' book published, arguing children have the power in the new age. Links up with BBC2 TV series.
	Children's Internet radio station reported
	Prince Charles calls for expenditure to be on books and to entice children away from computer games
	Scottish proposal to close rural schools and enable children to learn via Internet
	Brass Eye (C4) spoof on media hysteria surrounding paedophilia
	Mobile Data Association report on children's text messaging
	Report on Indian children teaching themselves to use computers through stand-alone kiosks in cities
August	British Journal of Sports medicine highlights obesity concerns
	EU privacy legislation potentially undermines police ability to combat Internet paedophilia
	Japanese study suggests computer games lead to violent tendencies in children's brains (Kawashima study)
	RM study of parents attitudes to children's computer use
	Powergen survey of children's computer use in the home suggesting screen-based leisure activities makes it hard for children to return to school
September	Survey of teachers raising concerns about children's behaviour
	Helsinki study suggests computers can be used to boost brain function
	Scottish executive launches study in to children's 'play' practices amid concerns about computer games and obesity
	BSC/ITC report suggests parents have given up controlling children's games and TV
	9/11 World Trade Centre Attacks
	Report on projects to get children back to traditional games and play such as skipping
October	£400m CRB scheme delayed
	MORI poll on children's home computer use
	British Heart Foundation poll of 13-15 year olds fitness and exercise practices
November	Daily Telegraph articles – proposing rethinking of 'schools of the future'
	4 boys expelled from private school for creating ecstasy based on web 'recipe'
	Lancashire University study suggesting games good for thinking skills
	Debate over human rights laws which allowed 'paedophile' to walk from court
	Research on children's absorption of radiation from mobile phones
	Home Office Minister announces review of offences on Internet grooming
	Microsoft settles anti-trust case
	LSE and EU reports highlighting children's experience of grooming, pornography etc on Internet. 90% of youngsters have seen porn or violence
	Estelle Morris launches £11.75m scheme to enable teachers to use handheld computers to tackle truancy
	International police collaboration to track down 129 paedophile suspects

December	Institute of Contemporary Arts report argues children becoming 'techno-thinkers' at early age
	Blair/Morris launch of 'classrooms of the future', 'curriculum online' and BBC 'digital curriculum'
	Survey of violence in computer games played by children by 'Children Now'
	Academic research in Portugal argues computer games generating violence in children

Table 6-4: Key News Events 2001

6.4 Articulating childhood

As Tables 6-3 and 6-4 demonstrate, while the ‘real world’ offers a range of diverse social events, practices and discourses from which to draw in the representation of children’s interactions with technology at this period, it is clear that, far from either a random or diverse representation of ‘reality’, the newspaper field presents relatively regularised representations of childhood-technology in this period (see Table 6-5). In other words, from these diverse sources and across these different social events, particular articulations of children with other elements of social life are privileged.

An analysis of the collocations of the word ‘children’ with other words in these texts gives an overall sense of the ‘company a word keeps’, namely, the associations between children and other elements of social life in 1997 and 2001

Children 1997		/1000	Children 2001		/2583
School (47) Teachers (17) Schools (16) Learn (15) Education (11) Teaching (9) Educational (8) Learning (14) Education (14) Skills (14)	165	.165	Internet (166) Computer (118) Online (68) Software (51) Chat (46) Sites (32) Computers (31) Net (25) Chatrooms (24)	561	.217
Computer (44) Technology (11) Internet (37) Computers (30) Computer (10) Site (8)	132	.132	Images (103) Paedophiles (63) Indecent (54) Abused (44) Pictures (42) Photographs (36) Sex (35) Pornographic (32) Pornography (21)	430	.166
Parents (50) Families (9) Home (37) Family (8) Parents (11)	115	.115	Parents (160) Home (47)	207	.080
Games (25) Games (8)	33	.033	School (78) Learn (45) Education (25) Schools (25)	173	.069
Protect (21) Protecting (8)	29	.029	Protect (66) Dangers (25)	91	.035
Information (12)	12	.012	Games (80)	80	.031
Pornography (8) Sexuality (8)	16	.016			

Table 6-5: Collocations of ‘Children’ in print media texts 1997 & 2001⁹⁴

⁹⁴ For both 1997 and 2001 I considered the ‘top 192’ collocations focusing specifically on verbs and nouns and ignoring prepositions. Because of the difference in numbers of texts in the two years, this means that in 1997, collocations with an occurrence of over 8 were considered, while in 2001, collocations with an occurrence of over 20 were considered. To provide a comparison between the

In 1997, we can see a close articulation of childhood with educational institutions and practices and with the family home. The relations between these sites and children-technology, are primarily conceived in educational terms although the collocations of children with 'games', 'protect', and 'pornography' suggest the emergence of narratives which construct children's relationships with digital technologies as potentially problematic. The collocation of children-technology with information, however, suggests that the construction of the Internet as primarily an 'information resource' for children is becoming established in 1997.

By 2001, we see a very different picture. Children are primarily collocated not with educational institutions but with technologies alone, and then with the Internet as a site of potential risk through child pornography, paedophilia and sexual activity. The home is the site next most associated with children, potentially suggesting that it is the use of computers in the home that is of most concern, with the articulation between childhood, technology and education significantly less visible. Games continue to maintain their same potentially disruptive association with childhood, while 'information' does not feature as a collocation with children in this year.

We could begin to conjecture, on the basis of these analyses, that between 1997 and 2001 we witnessed childhood being 'de-articulated' from the institutions of the school and the home, and re-articulated to the Internet – thereby articulating children with a wider world represented primarily as problematic and equated with risks to children from adults and through technology. I will return to this conjecture later in the analysis.

While collocations can provide some insight into the articulation of children with other social and discursive elements, an examination of the synonyms for 'childhood' and 'children' of the period also provides some insight into this articulatory process. Looking at these synonyms (Table 6-6) it is clear that childhood is profoundly articulated with technologies in this period, usually in a manner that identifies technology use as a key point of differentiation between childhood and adulthood (the word 'generation' serves to create relations of

two years I have divided the number of collocations by the number of occurrences of the word children and included this in columns 3 and 6.

difference between children today and those of the past, and between adults and children). Use of technologies is constructed as a defining feature of childhood, where children are produced as hybrids of nature/technology (dotcommunards, cyberchildren, cybernauts).

Cyberchildren	Cybernauts	Dotcommunards
The 'slouch' generation	A 'lost' generation	The Nintendo Generation
Zombies	Wired Child	Computer generation
Computer junkies	Couch potato	Cyber potatoes
Empty software programme	Generation of 'couch potatoes'	Generation of pallid anoraks
Generation Y	Idle Generation	Joystick Generation
Lost in cyberspace	Online wired generation	The TV generation
Playstation generation	Screenagers	The RSI generation
The passive generation	Techno-generation	The 'Gimme' Generation
The age of the zombie	The Bedroom Generation	The blob generation
The laptop generation	The net generation	The next generation

Table 6-6: Examples of synonyms for childhood in newspaper articles 1997 & 2001⁵⁵

Throughout these articles, however, there is a cumulative effect which creates relations of equivalence between the different 'attributes' of this generation. The 'child/technology' hybrid is produced in relations of equivalence with damage to children's health ('slouch', 'couch potato', 'passive', 'zombie', 'pallid anoraks', 'blob', RSI). This cumulative effect (not evidenced in one article alone but a slow process accumulating to the point at which these terms become readily accessible shorthand in any single article) serves to produce a 'common-sense' meaning for childhood-technology assemblages, in which characteristics of novelty, technology and physical and mental decline are articulated.

The child computer user is 'overdetermined' in this discourse, s/he is delocated from real social practices and comes to function as an 'imaginary' child. This imaginary child is mobilised to represent multiple different elements of societal, physical and technological change in a way which articulates often conflicting discourses – the child is both at risk from technologies and changing the world through technology; the technologies both damage children's 'natural' behaviour, and come to *define* natural behaviour for the child. The child-computer user comes

⁵⁵ These synonyms were recorded each time I came across one in the texts used for detailed analysis in section 6.5, they are not an exhaustive list of synonyms for childhood at this period, but broadly representative of the types of language used as 'shorthand' for children in these articles.

to serve as the focus for anxieties of the changing nature of human and technological agency in late modernity.

We also find that the practices of the media field structure the ways in which more nuanced representations of children's relationships with technologies are incorporated within a set of typical 'narratives' of childhood. This is in evidence in the typical structures of newspaper articles, in which research sources are mobilised to support three common 'story styles' which constitute 'news' stories at this period.

These are first, the 'discovery' of a new fear arising from new research; second, the 'discovery' of new research which challenges common sense assumptions and fears; and third, the use of research as a straw dog for contradiction by common sense and 'everyman' assumptions. These storylines structure the means by which research evidence is introduced to and recontextualised within the media field, and they are primarily organised around three common sense assumptions about 'cyberchildren': first, that computer games are damaging children's intelligence and health; second, that the Internet is a dangerous place for children from which they must be protected; third, that children are natural computer users, but that this 'ability' is one of potential hazard to children's own welfare, particularly as it relates to games or the Internet. These assumptions structure the terms of the debate and are the nexus around which other positions are mobilised either in agreement or contestation. The following examples show the ways in which, for example, the 'computer games are damaging' assumption is mobilised as a key means of introducing 'research news' into this ongoing narrative:

A growing body of research in America suggests that computer and video games - for long the bane of parents who believe that such gadgets do no more than rot their children's brains - may benefit the health of young minds. There is evidence also that a youth "misspent" in the company of computer games serves as useful grooming for a role in a high-technology economy. According to Patricia Greenfield, a Professor of Psychology at the University of California. Yet those fears are now crumbling as evidence emerges that a childhood spent with computer games does not turn potential solid citizens into unproductive vegetables. According to Idit Harel, founder of an Internet website for children, "the kids who grew up immersed in computer games are now in their 20s and they are for the most part a generation of bright, thoughtful and successful young people". Varadarajan (1997)

While many critics usually deem computer games to be socially isolating, preventing children from developing social skills, others counter that they in fact promote social interaction and growth. There have also been a number of innovative uses of games in therapeutic contexts, such as training aids for some hospital patients. (Wapshott, 1997)

They are seen as a generation of computer-game junkies. But teenagers may have a healthier attitude to new technology than adults believe, according to a survey for software giant Microsoft (Millar, 1997)

Despite the gloomy forecast that the computer generation no longer reads, book sales are booming and there has never been such an array of fiction aimed exclusively at the younger reader. (Marshall, 1997)

If research news offers alternative, more nuanced images of childhood, it becomes difficult to incorporate it into these ritualised storylines. The researchers regularly cited in the press in 1997 and 2001, for example Mark Griffiths of Nottingham University, Sonia Livingstone of the LSE and Patricia Greenfield in the US, all work on research agendas specifically related to these concerns: Internet/games addiction, Internet dangers, and the role of technology in increasing/changing children's intelligence. Other research narratives, relating to children's relationships with technologies that don't 'fit' these storylines, often based on school research, are relegated primarily to education pages while on the occasions in which there is an absence of academic research to fuel the endless oscillation of the news cycle (games are bad/ games are good/ computers are anti-social/ computers increase social interaction) the gap is filled by quasi-academic research studies conducted by commercial market research companies and funded by the technology sector.

These articulations, synonyms and storylines serve to provide the discursive conventions, the specific 'recontextualising principles' of childhood and technology in the media, with which new discourses of childhood and technology must be articulated. It is into this context that the educational discourses of the New Labour government are introduced, and in relation to these conventions that emergent articulations of computers as educational resources for children in the home must be configured.

To further understand these processes I want to discuss three parallel narratives which emerge in 1997 and 2001 relating to children and technology. The first

relates to children's technology use in school; the second to the emergence of the home as an educational setting; the third to potential challenges to assumptions underpinning the roles envisaged for children in both school and home settings.

In the analysis, the articles are analysed *both* as sites of production of representations of childhood, and as 'windows' by which we can understand the social events of the period. They are analysed, therefore, for the workings of discourse in the creation of new representations of childhood practices and institutions and as a means of accessing the extent to which these representations were enacted in social realities.

6.5 Narratives of childhood and technology 1997 & 2001

6.5.1 *Transformation or tradition: the contested role of technologies in education*

In the previous chapter I outlined the principles of New Labour's proposals for education, in which I argued that the government's response to the potentially disruptive emergence of digital technologies, and children's use of such technologies, was to attempt to articulate these closely with the practices of education across the multiple sites of school, home and community. I also argued that in this process there was an attempt to articulate the discourses of 'change' associated with digital technologies to the existing discourses of educational practices which emphasised 'the basics' and the role of the teacher. In this section I want to understand how these attempts to articulate technology with education were recontextualised in the public sphere of newspaper coverage.

What is clear from this analysis, however, is that the characteristically New Labour practice identified by Fairclough in which 'there is no clear line between finding policies that work and policies that win consent', shifts the relationship between 'political' and 'media' spheres from one of simple recontextualisation (in Bernstein's terms) to a dialectical relationship between the two fields. Indeed, as McRobbie has argued 'Most political strategies *are* media strategies. The contest to determine the news agenda is the first and last battle of the political campaign' (McRobbie, 1995: 571) In analysing the media texts that 'cover' the presentation of the New Labour government's proposals in 1997, then, we are not analysing only a

process of recontextualisation, but a process of interaction, even ongoing dialogue, between the different sites. In this interweaving of the practices of different social sites, the interpretative processes in the media field cannot be clearly delineated from the interpretative processes in the policy field.

Let's first return to Blunkett's speech in May 1997 which outlined the New Labour policy on technology and education. In it, he argues that technologies will be instrumental in enabling 'fundamental change' in education, in which the 'school of the future will be fundamentally different to the learning of the past'. At the same time, however, he attempts to ally these changes to the achievement of traditional educational goals and adult/child relations:

If we are successful in facing this challenge the school of the future will be fundamentally different to the learning of the past. IT will become an aid to teaching not a substitute for it, with basic skills learnt at the earliest possible stage and technology enhancing opportunities for accessing information, for sharing resources and good practice [amongst teachers] and for preparing for employment in the 21st Century. (Blunkett, 1997)

If we look at the newspaper articles of 1997, it is clear that this discourse is appropriated within the media field in two distinct and opposing ways, which open up and challenge the uneasy articulation of 'socio-technical change' with 'traditional educational goals' established in the New Labour Discourse. Indeed, these two competing imperatives harden by the end of the year into oppositional hegemonic blocs attempting to articulate the floating signifiers of the information society to particular and distinct ideas of the child as educational subject.

Appropriating the discourse of radical transformation

First, the discourse of 'fundamental change' through technologies envisaged in the New Labour discourse is appropriated by advocates of radical educational transformation, arguing for a change in the goals, practices and sites of education. The launch of the Stevenson Report, then the proposals for the National Grid for Learning, create a discursive 'opening' in debates on education for the re-emergence of the long tradition of child-centred education, and the advocacy of approaches to learning which offer different 'active' roles for the child. As Lee argues:

The central features of the child-centred approach – stimulating children's active learning and decoupling adult authority from the business of education – are being taken up and repeated in a rather different context, that of the use of ICT in education. (Lee, 2001:82)

In May 1997, two articles appear (in the Guardian and the Independent) written by academics working in the field of education and technology. These construct the introduction of technology in education as inevitable ('the classroom of the future will rely both on the Internet and on books'), yet both challenge the assumption that technologies can be unproblematically introduced into education without fundamentally changing relations between teachers and pupils or educational goals. Picas, from the Institute of Education, for example, writing in the Independent, argues that these technologies will provide challenges to traditional goals, and may require the development of new ones:

Children's English [...] will not improve as traditionalists may wish. E-mail fosters informal styles, with shortcuts, abbreviations and tolerance of typing and spelling errors [...] More important is that children can learn new skills for handling information, such as classifying, making connections, putting ideas together (Pincas, 1997)

While Martin Cohen, from CITE in Plymouth, paints a picture of radically different approaches to educational practice – suggesting the potential emergence of distance education, computer tutors, networked learning and, perhaps most radically

...the Internet also changes the idea of the teacher/pupil relationship. Computerphiles have long dreamed of teachers becoming less of a source of knowledge and more of a facilitator and manager of learning resources (Cohen, 1997).

In essence, these two articles signal the beginning of what one journalist writing later in the year called

the battle for the innocent souls of British schoolchildren (Pascoe, 1997)

Arguably, these interventions signal a weakening of the relational systems which maintain the 'natural' articulations presented in new Labour discourse, of technology as allied with 'efficiency' rather than radical change. At the same time, they begin to weaken the relational systems which maintain the 'ideology of

childhood' as a natural state of passivity and dependency. This potentially creates the conditions for an 'organic crisis' and the emergence of new antagonisms across different social groups. It opens up both technologies and, arguably, children's use of such technologies as floating elements to be appropriated to one particular historical bloc or another – their meanings have been destabilised and their articulations to other social formations are rendered possible.

An interview with Stephen Heppell in the Daily Mail in May appropriates the discourse of the information society within calls for radically different approaches to education, positing a view of children as active participants in educational processes:

It is designed to help pupils get more out of information and communication technology (ICT) by working in the same co-operative and dynamic way that go-ahead businesses use the Internet [...] Pupils work together, finding information, teaming up on language and science projects, creating educational materials and chatting on-line via email (Grant, 1997)

By June, and to coincide with the publication of Labour's 'Excellence in Schools White paper', new voices are added to this emerging hegemonic formation: David Hargreaves publishes his proposals for 'home-schooling', and Colin Rose argues, in 'Accelerated Learning for the 21st Century' for a radical shift in our understanding of educational goals in late modernity.

In a long piece in the Sunday Times, the potential instability in the articulation of technology with educational efficiency constructed in New Labour discourse is opened wide, as the introduction of technologies is presented as dislocating educational practice from the school, and introducing a new raft of educational objectives. Hargreaves' proposals, for example, construct technologies as striking at the heart of traditional educational values, namely, the primacy of the school as a site for learning, and of the teacher as a source of knowledge:

Technology is a key stimulus. In the past people lived in a society where teachers were regarded as almost the sole font of knowledge. But today families can exploit a plethora of information sources, including television, radio and the Internet (Welsh, 1997)

This article combines Hargreaves representation of technologies as profoundly destabilising the institutions of education with Colin Rose's argument that economic success will be based on 'independent, creative and self-motivated learners'. In so doing, it presents 'de-schooled', technologically mediated education as the necessary solution to the opportunities and challenges of 'the information age'. Throughout the article, a series of equivalences and differences are produced which offer the potential for a new ideology of education, and hence childhood, to emerge. These can be briefly summarised as:

<i>Home</i>	<i>School</i>
<i>Diverse sources of information (information technologies)</i>	<i>Single source of information (teacher)</i>
<i>Post-industrial</i>	<i>Industrial</i>
<i>Personalised</i>	<i>Mass</i>
<i>Child as active learner</i>	<i>Child as passive recipient of information</i>
<i>Self-generative workers</i>	<i>Operational workers</i>
<i>Information age skills</i>	<i>Industrial age skills</i>
<i>Creativity and maturity</i>	<i>Submission and reliance</i>
<i>Future economic success</i>	<i>Future economic failure</i>

Arguably, however, this article in the *Sunday Times* begins to articulate this set of oppositions with the interests of middle class families. For example, if we look at the *Sunday Times* article it addresses its readers as affluent, socially mobile and financially stable. It references the difficulties of 'driving to school', or moving house to 'live near a good school'. It presents a future in which employees, in the same way as they are offered 'perks' from their companies already, can expect their employers to fund tutors or technologies to support home learning. It profoundly personalises and privatises educational practices to interactions between individual families, the technology industry and businesses; and it equates child-centred education outside schools with the acquisition of necessary skills for economic competitiveness. This articulatory process embeds the arguments for child-centred education within a neo-liberal discourse which downplays the role of the state in educational practices and refocuses attention on private relationships of consumption between families and education providers (from whatever sector). This articulation may be the beginning of processes which emerged only in later New Labour terms in office, of 'personalising' a wide range of state services (a discussion I will return to in the final chapter of the thesis), a process which Hall describes in relation to the NHS:

The reduction of the citizen to consumer and the 'privatisation of need' at the center of the market model are thus absolutely crucial but unspoken foundations to this strategy. [...] if they can be induced by relentless 'spin' to think of the NHS only in the individualist terms of 'I need to move faster up the waiting list', then they won't mind who produces it or whether health becomes a lucrative site of private sector investment. It's simply one more 'market' response to one more individual consumer's demand. (Hall, 2005:334)

What we begin to witness in 1997 is that media texts serve to create an articulation between proponents of child-centred technology-mediated education and proponents of neo-liberal, deregulated educational practices. The differences in goals and philosophies of these two views are obscured by their articulation in the commonsense concept of 'education for the information age'³⁶, a concept that is mobilised by both groups in the awareness of the support that this will generate across a range of different social actors.

In 1997, however, this articulation potentially undermines the voices of child-centred educationalists, as it links their arguments profoundly with those made by the technology industry and those wishing to create new relations between state and industry. As Trevor Phillips argues, it places these proponents in an uncomfortable alliance with 'strange bedfellows':

When it comes to funky New Labour values, we already have them graven on our hearts. We care about education, especially hi-tech, Internet-type education. We want the environment to flourish for our children. We love the idea of the world joining hands in a great multicultural hymn of solidarity. But when politicians start talking earnestly about such values it's hard to hear for the sound of roaring laughter. So who else can best promote these - let's say it - lefty values most successfully? Some surprising champions of New Labour values are emerging, and strange bedfellows they make for former socialists. In education and technology, it is not David Blunkett's words which convince us; it is those of Bill Gates of Microsoft, and Sir Iain Vallance of BT. (Phillips, 1997)

The arguments for radical change of educational practice and goals through computer based education, which were conceived as attempts to empower young

³⁶ This is not to suggest that this is an articulation that is neither wanted nor mobilised by the proponents of these different views. Historically, the field of computer education has been driven by psychological rather than sociological considerations.

people and democratise education⁵⁷, are, in this context, seen by some commentators as complicit with processes of the commercialisation of education. This is unsurprising as the central means by which to achieve computer-based education was envisaged by the government as necessarily to be produced through public/private partnerships:

*[The Grid will] Stimulate public/private partnership, bringing together the best of private sector creativity and the highest standards of public service
Ensure that nothing is provided at public expense, which otherwise could be provided commercially of good quality and reasonable cost (DFEE, 1997:2)*

Nothing could herald this objective more clearly than the decision to launch the NGFL on the same day as Blair held a breakfast meeting with Bill Gates.

This decision, however, drew immediate challenge from commentators in the press who envisaged a future in which educational practices would be shaped and determined by the interests of private companies:

Imagine, biology lessons sponsored by Monsanto, or chemistry courtesy of Glaxo-Wellcome. It's not that what these organisations have to say is wrong, just that they are speaking from one perspective, jaundiced by an overwhelming desire to make their point heard. The chances of children enjoying a rounded education in these areas would be slim. And yet the Government seems happy to endorse the world's most powerful IT magnate by inviting him into schools to make good its election promise' (O'Neill, 1997)

At the same time, other commentators envisaged a situation in which children in schools were seen primarily as future consumers:

Once schoolchildren are trained on one standard, they are likely to want to stick to it for the rest of their lives. If Microsoft can catch them young, it will have a good chance of winning their custom later. (No Byline 1997b)

To support the introduction of technologies in education, to be proposing radical changes in educational goals and practices, was to be articulated with those welcoming the commercialisation of education. Indeed, Selwyn's (2000) critique of the introduction of the NGFL in the UK is premised precisely upon an analysis

⁵⁷ See, for example, Papert's arguments in 'the children's machine' which are profoundly directed at enabling children to learn in local 'small schools' which place children's ability to act as active participants in their learning at the heart of their agenda.

which produces support for technology in education as closely implicated in the support for closer links between commercial and education sectors. What emerges from this process in these newspaper articles is a crude set of equivalences, which produce advocacy of educational change, of rethinking the role of schools and teachers and of introducing technology into education, as complicit in an agenda promoting the commercialisation and 'liberalisation' of educational practice. While the educators and researchers proposing the introduction of technologies into education could, quite rightly on many occasions, be accused of political and commercial naivety, the way in which media texts produce these positions as equivalent fundamentally serves to obscure the different objectives of these positions. After all, as Prout points out:

...although these multiple interests in selling IT are important, their recognition is not inconsistent with the idea that ICT creates new possibilities for generational relationships (Prout, 2005:121)

For those researchers and academics who closely allied themselves with the child-centred education of the 1960s, and who were primarily interested in the use of technologies to enable children's agency and learning, then, to find themselves on the same side as neo-liberal proponents of public-private partnerships in education was (and remains today) potentially uncomfortable. This articulation potentially undermines and excludes their ability to ally themselves with advocates of children's rights and education, as it positions them as advocates of economic and technological determinism in the transformation of schooling practices. The implications of this uncomfortable alliance, and the potential routes we might take to challenge it, are discussed in the final chapter of the thesis.

Reaffirming traditional goals

The challenge to the New Labour articulations of children and technology however, does not emerge solely from the 'child-centred' and 'neo-liberal' movements. Instead, the uneasy articulation of radical technological change with basic skills and teacher authority that is present in New Labour discourse, is also destabilised by those who construct a set of equivalences between digital technologies and a loss of basic skills and teacher authority. This hegemonic struggle is most visible in October 1997, at the time of the launch of the NGFL,

which saw the creation of a network of texts linking this event with a speech by Princess Anne, an article by Todd Oppenheimer called 'the computer delusion', and a lecture by Bill Gates in Cambridge.

At the same time as Blair was breakfasting with Bill Gates, and launching the NGFL as a major initiative, Princess Anne was giving a speech to Head teachers of independent schools. This speech was a gift to journalists covering the NGFL launch, as it served as a resource for the creation of a major news controversy. What Princess Anne may have actually said is lost in the mists of time, but certain elements were enthusiastically recycled in media coverage of the NGFL proposals as it served as a warrant for a competing view of the relationship between technologies and education. In essence, the speech was appropriated within a discourse that opposed the 'hype' of Blair's launch of the NGFL with Bill Gates, with a 'common-sense' argument to concentrate on 'the basics', on 'socialisation of children' and on 'teachers'. The following are examples of the way in which the speech was presented:

THE Princess Royal yesterday dampened the hype surrounding the Bill Gates roadshow when she warned teachers not to place too much reliance on computers as the solution for improving standards in education (Carvel, 1997)

COMPUTERS are no substitute for good teachers, the Princess Royal warned yesterday. Princess Anne said pupils had to master the three Rs before they could make any sensible use of information technology. Her warning about over-reliance on computers came as the Government announced a \$100million scheme to link schools via computer to a 'national grid for learning' and Tony Blair met billionaire Microsoft boss Bill Gates (Halpin, 1997)

SHE MAY not be followed around by hordes of snappers or be much given to public hugs and cuddles, but Princess Anne does talk a lot of sense sometimes. She has been talking some about the dangers of children becoming enslaved by computers. While tony@numberten.uk, with his ambition to hook every child to laptop like a cow to a milking machine, sucks up to the Microsoft mogul Bill Gates, the Princess Royal warns of the isolating effects of information technology. (Waterhouse, 1997)

This intervention potentially radically destabilises New Labour efforts to articulate technology with traditional educational goals as certain journalists begin to ask whether, if basic skills are the primary concern, computers may simply be a costly distraction from the real business of education. Todd Oppenheimer, for example,

Associate Editor of Newsweek Interactive in the US, published an article in the Observer called 'The Computer Delusion' which argued that

There is a move away from educational traditions that encouraged students to rely on their brains and five senses, and developed their abilities to communicate insightfully with people. And it is a move toward reliance on a machine, which too often dumbs down children's thinking rather than expanding it. Computer promoters argue that they do not want to lessen attention to fundamentals and real-world creativity; they are simply adding one more skill. In the real world of the classroom, however, this vision is unrealistic. The school day is limited in time, money and teachers. Every hour spent on a computer is an hour not spent outside looking at real trees, or in conversation with a real person. [...] When each [new technology] failed to deliver, it was blamed on teacher resistance, or school bureaucracy, then finally on the machines themselves. Schools were then sold on the next generation of technology, as is occurring today, and the lucrative cycle started all over again (Oppenheimer, 1997)

This network of articles serves to produce a set of oppositions between technology-mediated education and traditional teacher-mediated education:

<i>Computers</i>	<i>Teachers</i>
<i>Information</i>	<i>Knowledge</i>
<i>Social isolation</i>	<i>Socialisation</i>
<i>Ignorance</i>	<i>Basic skills</i>
<i>Commercial Interests</i>	<i>Needs of children</i>

This process articulates powerful social interests, from the royalty, to the teachers unions, to the press. Interestingly, both right wing and left wing press interests are allied here, as the right wing press argues for traditional values in education, while the left wing press critiques the involvement of big business, and both advocate a return to an emphasis on teachers skills and knowledge rather than technology purchase.

In response, both the commercial sector and the New Labour government attempt to relocate technologies as tools not for children, but for teachers. Technologies are presented as there to help teachers, not to challenge them. For example, Gates in a speech in Cambridge on the afternoon of October 7th, argued:

Nobody is suggesting that technology is a substitute for the teacher. In terms of getting kids working together and motivating them, it is the teacher that is most important (Gates, quoted in Garner, 1997)

While Blunkett argued that the investment was in order to give teachers additional tools:

The princess – who admitted computers played a limited role in her life – found support from David Blunkett, Education and Employment Secretary. He said the extra £100m in public funding for computers would give teachers access to a powerful educational tool. But he added: 'This is not a substitute for implementing the tried and tested methods which form the foundations of our literacy and numeracy drive, but a key complement to it (Carvel, 1997)

This discursive shift moves the focus of attention from children's emerging interactions with technologies in education, to teachers' use of technologies to achieve the existing goals of education. It attempts to construct an alliance between teachers, teachers unions and the technology sector, and one result of this discursive move is the renewed emphasis in policy circles on the development of the NGFL as a resource for supporting teachers. This discursive and material articulation, however, is clearly far from stable; the spaces for debate opened up by the attempt to ally fundamental technological change with traditional educational values will not be easily closed down. Indeed, in this space there emerged two competing but unequal blocs,

Child-centred educationalists

Computer advocates

De-schoolers

Traditional curriculum-centred educationalists

Royal Family

Left wing and right wing press

Teachers Unions

Across these blocs the 'technology industry' and government ministers moved with some deftness of foot – advocating radical change in some circumstances, on others reassuring the unions and public opinion that '*Nobody is suggesting that technology is a substitute for the teacher*'.

What is clear, however, is that the terrain on which this battle was (and still is) fought is not around children's experiences of education, but around what we can define as the best 'education for the information age'. Whether constructed as child-centred and computer-based, or as teacher-centred and book-based, the question that these debates were addressing, as represented in the newspaper

articles of the period, had no relevance to the question of children's own experiences of using digital technologies, but was premised on the view of the child as a 'future worker'. Even 'de-schoolers' had to reference 'preparation for the information society' as the basic premise of their arguments in order to be represented in the press. As such, there is little sign of a destabilisation in these discourses of the relationship between adults and children through the use of technologies. It is to parents and teachers, not to children, that these articles are addressed, it is by parents and teachers, industry leaders and policy makers, that these concerns are to be managed. The child, effectively silenced in these discussions, becomes little more than a cipher, a metaphorical figure for the future success of the state. That this should be the case may be due to the clear historical difficulty of re-articulating 'schooling' (the institution of the dominant framework 'par excellence') with ideas of the child as a social actor, as 'being' rather than 'becoming'.

The educational debate was, however, only one theme in the representations of children and technology in 1997 and 2001. The home as a site of technology use, and the Internet as a site of children's play, are the subjects which form the basis for different articulatory processes and the creation of alternative representations of childhood in the news articles of this period.

6.5.2 *Home + computer = extended education*

By 1997, there were regular columns appearing in most national newspapers providing advice to parents on what computers to buy, which software to use, and how to manage children's computer access. The Parents Information Network, for example, a national charity established to offer impartial advice to parents, had a regular column in *The Express*; *The Guardian* had 'Netwatch', a weekly roundup of new software and Internet sites. By Christmas 1997, many national newspapers offered special supplements offering advice on which computers to purchase and which software to choose. Others ran competitions for parents to win computers for their children for Christmas.

To begin, let's first explore the linguistic features and resources on which these articles draw. What is notable on reading these articles, is their distinctive mixing

of 'reportage' and 'advertising' genres. The following text, for example, is drawn from an article in the Mirror on 'Christmas Computers'. It mixes the traditional forms of reporting (reported speech, description of social events) with advertising and marketing jargon, to the extent that it is impossible to be certain that marketing men haven't written the text 'reported' as the child's speech. It begins by mobilising the image of the 'cyber generation', and uses this commonsense assumption as warrant for the appeal to parents' interests:

Today's youngsters are the new cyber generation. At ease with machines on which they do their homework and play games, they expect to have the basic technology at home and many look for something more. We tracked down computers to suit four youngsters and their families, each with their own specific demands. [...]

Despite advice to stick to PCs, Owen was determined to get his favourite system, Apple Macintosh. Is he wise? He tried out the fastest home computer on the market, Apple Creative Studio, together with the Laser Jet Photo state-of-the-art printer from Epson - and proved his point[...] Now that I've tried the Creative Studio, I'm even more sure it's the machine for me. I've got a lot more to save up yet - but it'll be worth it." The Power Mac 6500/300 Creative Studio comes with a 300Mhz processor, a faster CD Rom drive and Avid Cinema at pounds 2,245. Other computers in the Power Macintosh series range from pounds 1,025 to pounds 1,745.

This sounds like the key to success (Visser, 1997a)

What is common to these articles is a representation of children as demanding and informed consumers of new technologies allied with a representation of children as educational subjects whose needs, it is implied, will be thwarted by the failure to purchase a home computer:

the home computer has become less of a status symbol and more a necessity [...] But if you're baffled, don't worry. To make sure you keep up we've prepared this 3-page guide, which cuts through all the jargon and puts you at the head of today's technological revolution... The home computer, or Personal Computer (PC) as it's known, has moved from being a rich man's toy to a home workhorse that can help with the children's education, organise your life, connect to the Internet, and much more. (Hancock, 1997)

This mixing of discourses, combining information ('or personal computer as it is known'), reportage ('the home computer has become less of a status symbol and more a necessity') and marketing ('that can help with the children's education,

organise your life, connect to the Internet, and much more') is particularly prevalent in the tabloid newspapers of this period. In a similar way to Blair's presentation of himself as a computer dunce, baffled by his children's 'natural use' of the computer, these articles address the (adult) reader as unfamiliar with technology, and children as 'techno-wizards'. These articles serve to produce particular relations between parents and children around technology; namely, to produce the purchasing of computers as part of parents 'educational responsibilities' to their children. In so doing, they serve to produce the home and the home computer as an essential element of educational practices of childhood in the late 1990s. This convention has become so familiar by the end of the year that it is subject to satirical comment which never, entirely, undercuts its persuasive appeal:

You've all seen the ads. A happy family, with that Fifties glow, clustered around the computer, all learning together as they dip deep into the Internet. (Burne, 1997)

An important element in the construction of this image of the 'ideal techno-family' are a raft of 'research reports' which emerge throughout the year designed to allay the fears of parents about the potential of technologies to disrupt family practices. These specifically attempt to counter the conventions of 'child + computer = damage to health/social well being'. Instead, these articles argue, computers contribute to family cohesion and stability and, specifically, to father's role in the family. They follow the same recontextualising principles outlined above (Section 6.4) of research being mobilised to provide counter-evidence to commonsense assumptions. A poll by NOP for BT Home Office at the peak computer purchasing period of December 1997, for example, is the source of a flurry of articles claiming

Far from corrupting family values and blighting social skills, personal computers are bringing children closer to their fathers. That's the finding of a new survey by NOP published this week by BT. (Pitchford, 1997)

Fathers [...] are increasingly being tempted away from their heavy workloads to use the family computer as a teaching tool (No Byline, 1997e)

Into this discourse are woven the 'warrants' of academic credibility, in the form of the number of families surveyed, and direct quotations from academic sources, for example:

Child psychologist Dr Charlie Lewis, of Lancaster University, said 'PCs and the Internet are providing fathers with the opportunity to forge links and interact with their children, which previously did not exist. (No Byline, 1997e)

In the attempt to construct the home computer (a significant purchase for most families) as an essential and 'natural' purchasing decision, newspaper articles regularly conflate research, reportage and marketing discourses. Most flagrant of which was 1997s November article in the Mirror on a survey by Packard Bell, headlined 'Be Smart: get a PC of the action':

Computer owners are clever people.

A survey by computer manufacturers Packard Bell shows that PC owners appear to be more logical, more impulsive - and more inquisitive.

They also discovered:

Home computer owners manage their time better and have more interest in outdoor activities.

A PC is likely to bring the family together - although it can cause disputes as members compete for time on it. It also reduces the amount of time spent watching TV.

The "techno fear" is less now than it was at the beginning of the decade.

People expect the PC to become a status symbol. (Visser, 1997b)

The home computer is presented in these articles, in a manner contrary to popular assumptions, as a technology which encourages health, social interaction, educational development and is likely to bring families together and bring them social credibility⁵⁸. What's not to like?

The blurring of the boundaries between PR agencies, research activities and journalism is essential to the production of the home computer as a necessary item for families in 1997, with commercially funded research acting as warrant for and justification of marketing claims, all presented as 'news' within the context of claims of socio-technical change. This process serves to create an articulation

⁵⁸ There were a small number of articles in this period which also heralded the potential of technologies to compensate for familial and social breakdown, through using video-conferencing to enable parents to stay in touch with children after divorce. This was embedded in law in the US in 2001, with the introduction of 'virtual visitation rights' for absent parents.

between technologies, education, social and economic development and parental responsibility, it enables technologies to be introduced into what Silverstone and Hirsch (1992) describe as the 'moral economy' of the household, as resources that are produced within and in accordance with familiar familial values and concerns. They serve to create equivalences between computer ownership and the principles of 'good parenting'. By Christmas 1997, more than half a million people had spent £700m on the purchase of home computers, an increase of 20% on the previous years sales (Beattie, 1997). The MORI/Motorola survey 'The British and Technology' of 1997, reported that over 90% of parents felt pressure to purchase computers for their children and that home ownership of PCs by parents with school age children was significantly higher than among the general population (MORI/Motorola, 1997).

The presence of computers, particularly networked computers, in the home opens up the possibility of reinforcing the articulations between home and school as educational sites with a shared agenda. Throughout 1997 and 2001, there are a series of articles which discursively build a representation of homes and schools seamlessly linked through technology.

Many of the 'consumer advice' texts of this period, for example, appeal to parents to participate in formal educational practices through the computer. In the peculiar mix of advertising and advice which informs many of the consumer advice columns, for example, parents are exhorted to use computers to help children prepare for and cope with school by purchasing new software products (e.g. 'parents can use software to help children cope with class tasks and homework'). At the same time, parents are encouraged to consider buying monitoring tools for the computer to ensure children are using computers specifically for educational rather than leisure (i.e. games) purposes. By 2001, as the technological capabilities of the networked computer develops, the home is even more closely tied into educational practices with the emergence of school websites which are promoted as a means of compensating for missed lessons or of accessing teachers out of school hours (Buxton, 2001). Parents are also encouraged to keep an ever-closer eye on children's formal education through a new web-based system 'which allows parents

to check on their child's progress from the comfort of their own home' (No Byline, 2001e)⁵⁹.

The 1997 articles specifically construct a role for parents in establishing, through the purchase of home computers, and maintaining (through their vigilance, their interactions with children, and their purchase of educational software) the home as an 'educational outpost' for the formal education system. A new form of 'commonsense' is being established here which constructs the home as a site for children's work (education) rather than leisure, a construction which potentially challenges the dominant framework's construction of the home, and childhood, as a site and time for play. If we look at the concordance analysis of these texts, for example, we see that there are 90 references to parents' role in educating and enabling learning, 90 references to parents purchasing technology and software for their children and 35 references to parents linking up with schools and teachers. If we examine the collocations of 'parents' in these texts, we see the word collocating with children 50 times, with teachers 23 times, with the home and the Internet 17 times, and with schools 15 times.

The naturalisation of articulations between school-technology-home, envisaged in the Stevenson Report, and reinforced in the Connecting the Learning Society proposals, would seem to be accruing in this period not only the material elements necessary to link these sites – the computers, the software, the Internet connections – but also the discursive elements which give these articulations meaning and which transform the material connections into conventional social practices, capable of shaping further interactions. This process is supported by a network of interests – the commercial companies opening up the domestic market, the political actors attempting to introduce 'governance' into the home, the media field's reliance on storylines of significant socio-technical change.

In the creation of the home as educational outpost, the image of the technically competent child, frustrated at lack of access to technologies in the home and in danger of falling behind with schoolwork is mobilised, and given voice to in a very

⁵⁹ This parallels the emergence in 1997 of the 'Kindercam', a webcam that allows parents at work to monitor their children's time in child care centres, and of Smart Cards that allow parents to monitor children's attendance at lessons and the food they eat there during the day.

different way from the discourses surrounding school uses of technology discussed in the preceding section. The child in these representations is articulated profoundly with the practices of consumption. And the child-consumer of these representations acts as warrant for and justification of this investment for parents, even as this 'child-consumer' is acknowledged as an imaginary symbol of social change:

I bought a new home computer the other day, finally responding to a growing sensation - like the pressure on one's eardrums in an ascending aircraft - that the conditions of life were changing in some fundamental way. I pretended it was for the children, naturally. They have such marvellous educational software these days. . . all linked in to the national curriculum, you know. . . quite unforgivable to bring them up as cyber-bumpkins. . . they are, after all, citizens of the new information order. (Sutcliffe, 1997)

6.5.3 *Home + computer = new educational models*

The learning team at home

The representations of the home computer as an educational resource in these articles are premised on the same assumptions as Blair's representations of technology in education; namely, the neutrality of the technology which can be mobilised in support of existing educational goals, and the compliance of children and parents in using computers within existing educational practices. The home computer, these articles suggest, is an 'efficiency' device which will enable children to learn better and faster, but will not radically challenge the social relations of childhood with which we are familiar, namely, the boundaries between adult expertise and childhood inexperience, and the close articulation of childhood with the sites of home and school. These assumptions are problematised in a number of ways in newspaper articles in 2001, first, through new relations emerging between children and parents around computer use; second, through the shifting role of the computer as educational device and games machine.

By 2001, we begin to see the emergence of a set of newspaper articles which represent very different relationships between parents and children around the computer. In the first instance, children's increased use of technologies in schools, combined with their construction as 'natural' computer users, is presented as a powerful educational resource *for parents*. One article (Clinton, 2001) reports on the

‘new phenomenon’ of parents learning from their children how to use computers and represents a new image of the family as a ‘learning team’, drawing on research evidence from child psychologists and Internet research surveys:

But how do you tap into your child's skills effectively without losing face? Child psychologist Peter Gilchrist believes the best way to learn from your child is to first acknowledge you are having problems [...] Successful families work as a team and rally round to help each other. Underneath the authority role, a parent is still just one member of the family team. The child can also make a valid contribution (Clinton, 2001)

As discussed in chapter 2, a key characteristic of families in late modern societies is understood to be an increasing democratisation of the family based on increasing fluidity in adult roles and an erosion of the concept of parental authority as assumed rather than negotiated (Beck, 1992; Lee, 2001). If we look at the emergence of these representations of children as experts and educators in technology, however, they seem to take this shift in familial relationships a step further. Rather than seeing children ‘negotiate’ with their parents, in these articles children, rather than adults, are constructed as the ‘experts’, and experts in an area of social life which is understood as the most determinate of economic and social success – the ability to use computers in the ‘information age’. In response to this unprecedented ‘expertise’ and the *bouleversement* in adult/child relations that this presupposes, Clinton (in a manner reminiscent of childcare experts advising parents on how to protect their children from unwanted influence in the 19th century) offers a set of rules for parents to observe when attempting to learn from their children. These include, for example, ‘respect[ing] children's timetables’ and ‘not being afraid to ask directly when you have problems’. The formalism of this approach, and its instantiation in explicit guidelines suggests that we are witnessing here changes which require parents to radically reconceive their relationships with their children.

The child as ‘expert’ in technology use also emerges in a number of other narratives: for example the 11 year old who, seemingly self-taught, became the UK's youngest qualified computer technician:

On an average school night, he spends an hour on the computer and at the weekend he's capable of spending the entire day in front of the screen. 'He

doesn't play games, he just sits there programming.' Mrs Dorey said Christopher's talent did not run in the family. 'His stepfather is a policeman and his natural father is a VAT officer, so none of us have got a computing background or a particular flair for it,' she said. (No Byline, 2000)

In a similar vein, another article recounts the story of 'Dubit' a website set up by teenagers, which 'has broken into a market that multinational companies have coveted for years' (Goulde, 2001) despite having a board of directors 'still in their young teens'. While another tells of the 300 young people involved in the establishment of an Internet radio station. 2001 also witnessed the television series and book 'The Future Just Happened' which asserted not only that young people were competent in using digital technologies, but that their use of this technology was radically destabilising adult/child relations. For example, quotations from the author and the book which appeared during this period include the statements:

Lewis shows how technology inverts relationships between children and parents. Teachers don't want to miss out on the stock tops of their students. (Katu'ala, 2001)

the rapid change the Internet can generate leaves adults floundering. It is 'an uncivilising force in life. To have something that discredits you as you get older...' He shakes his head. 'A lot of our mental infrastructure is built on the belief that experience matters. When that falls away, all is lost. (Arthur, 2001)

Throughout 2001, we see the emergence of the image of the 'child expert'. This translates itself into representations of new relationships in the home and family, in which parents can no longer be seen to be sole holders of expertise and knowledge.

Instead, we see the development of competition between parents and children in the home, for example, articles report that 'fathers no longer let their children win because the kids are so good with a computer that they win anyway' (Mitchell, 2001). But most of all, we see the consolidation of the idea of parent-child relationships as based on 'team' relationships, for example, there are stories of fathers and children working together to tackle games problems:

And so we moved out of the house. And we became a team. And I'm not saying it was all plain sailing because when you have a 36-year-old who has never played a computer game in his life, led by a five-year-old who keeps veering

off on strategical tangents that make this government's handling of foot and mouth seem like a coherent policy, mistakes get made (Samuel, 2001)

Or stories of parent-child collaboration in household activities around the computer:

...parent-child collaboration is on the increase, say staff at the Tesco.com call centre. Spokesman Russell Craig explains 'we noticed there was a huge surge in the number of calls about online shopping after about 3.30 pm –when children were home from school. More often than not it was parents calling and then putting children on the phone (Clinton, 2001)

These representations construct very different parent-child relationships from those envisaged both by the marketing literature of the computer companies, and by the discourses of New Labour education policy.

What happens when these two discourses meet? In Clinton's 2001 article, we see a government minister's response to the phenomenon of the child-expert:

Schools are doing more than just educating their children with IT lessons'. He explains. 'They are bringing families together by giving children basic computer knowledge which they can take home and share with their parents (Clinton, 2001)

This interpretation of the 'expert child' is interesting in that it attempts to limit the potentially significant implications of children's expertise to the domestic environment, and in fact, presents children's acquisition of technological skills as being courtesy of the school environment. Children's expertise is not presented as arising from 'natural' interactions with computers, or from their use of computers in the home, instead, it is the school that is seen as sole site of expertise. In this reinterpretation of the phenomenon the government minister produces children's relations with adults as different in the two sites of home and school and, in so doing, creates unequal relations between the different sets of adults by presenting the image of the 'expert teacher' and the 'novice parent'. This serves to reinforce the traditional role of the school as the sole site of knowledge, even in an age of digital technologies and the Internet.

In practice, however, this distinction creates a disjuncture between home and school sites, as children's use of computers in the home are presented as characterised by radically different relationships between adults and children around the use of technology from the relationships between adults and children in the school setting. This potentially destabilises the attempt to construct the home as an outpost for the school which is premised on ideas of parents as educators, since this discourse is now required to compete with discourses of family 'learning teams' in the home. The discourses of family 'learning teams' could be considered a site of potential emergence of a counter-discourse to those of the 'extended school', and also, potentially, as contributing to government perceptions of parents as a problem to be overcome in the extension of schooling into the home.

The games machine

A second challenge to the stable articulation of the practices of home computing with the practices of formal education emerges in the multiplicity of social practices into which the home computer is already implicated. By the late 1990s, the multimedia home computer is understood as a multi-purpose resource which cannot be constrained to one use alone. The technology which enables access to educational resources is also the technology which enables the use of the computer for leisure activities, specifically games and Internet use. Indeed, the home computer had a longer history as an entertainment medium in the home than as an educational or productivity tool (Haddon, 1992/1998). The attempt to articulate this domestic machine into the educational assemblage, then, brings with it a number of potential challenges since it requires de-articulating the computer from 'leisure' use and 're-articulating' it with educational applications.

Two key discursive moves are in evidence in the attempt to 'manage' the potentially unruly games element of the home computer. The first is an attempt to set up barriers to the interpretation of games as a valid use of the computer – an attempt to fix the meaning of the computer as educational; the second, is an attempt to colonise the practices of gameplay within the wider discourse of development of 'information age' skills, a discursive move which fundamentally destabilises the association of computer technology with 'business as usual' in formal education.

As discussed in Section 6.4 above, the first attempt to 'fix' the meaning of the home computer as an educational tool rather than an entertainment device, is the establishment of equivalences between games play and damage to children's health and wellbeing. For example, in 2001 there were 65 articles related to games at this period, of which 32 were negative, 22 neutral, and 11 positive. Popular concerns related to the potential of games to make children anti-social (10), the rise in physical harm to children through RSI and obesity and their potential to encourage aggression and violence (8). The following quotation is a typical example:

The students who played computer games were halting the process of brain development and affecting their ability to control potentially anti-social elements of their behaviour. [...] The implications are very serious for an increasingly violent society and these students will be doing more and more bad things if they are playing games and not doing other things like reading aloud or learning arithmetic (McVeigh, 2001)

Prince Charles also entered the debate in a widely reported speech, setting up computer games in relations of equivalence with 'immediate gratification', lack of imagination and closing down of minds, in opposition to activities such as reading books, playing outside or visiting museums:

He told of the battle against video games and a need to "expand the minds and fire the imagination" of children. [...] "None of us can underestimate the importance of books in an age dominated by the computer screen and constant wish for immediate gratification" said Charles. "One of the great battles we face today is to persuade our children away from computer games and towards what can only be described as worthwhile books". (Dixon, 2001)

In response to these concerns, rather than constructing the child as expert in the technological field, children are presented as in need of protection not only from the contents and effects of computer games, but from themselves. Their digital expertise in this context is seen as potentially damaging to their welfare and their health, and acts as justification to constrain their use of computers. In this way, when considered alongside the parallel narrative of the 'learning team' described above, the child is produced in a paradoxical relationship with digital technologies at this period – both at the vanguard of the information revolution (as experts and

advisors to their parents) and at the rear (in need of protection from the same technologies).

The newspaper articles of the period produce a number of different ways in which parents can manage the unruly games machine. These predominantly involve the overt introduction of constraints on children's technology use such as limiting time spent on the machine, purchasing computers that will not run games programmes, and purchasing monitoring software to keep track of children's activities.

For these narratives of 'moral panic' and their subsequent injunctions to be sustainable, however, relies upon their correspondence with parents' day-to-day experiences of children as games players. Or, in Hay's terms:

...for particular ideas, narratives and paradigms to continue to provide cognitive templates through which actors interpret the world, they must retain a certain resonance with these actors' direct and mediated experiences' (2002: 212)

The newspaper articles of the period suggest that cracks may be emerging in the gap between lived experience of games play and reported narratives of games horrors. For example, a number of articles reference the fact that many parents had themselves grown up with computer games at home when they were younger, a representation that potentially de-articulates 'games' from childhood and makes them a resource that can be articulated with 'adult' practices.

People who took up computer games as teenagers in the mid-1980s are now having their own children, and are increasingly steering them towards computer games before they can read or write (Frean, 2001)

There were reports that increasing numbers of parents were themselves games players, although this was not yet seen as entirely socially acceptable for adults.

Computer games were once the sole domain of spotty adolescents and attention-deficient schoolchildren. No longer. (Gill, 2001)

One article of the period, for example, reports that

Six out of 10 fathers confessed in a Tesco survey they pretended that hi-tech computer games or gadgets were a present for their children (No Byline, 2001c)

Instead of being able to maintain a strict adult/child boundary in which adults are constructed as non-gamers and children as gamers, we begin to witness articles from fathers proudly proclaiming

A bit of respect here, please. You are actually in the presence of a Pokemon master (Samuel, 2001)

In response both to children's persistent games play and to the emergence of a new 'parent-gamer' phenomenon, we begin to witness in the articles of this period a new discursive move to incorporate games play as a legitimate activity in the context of the 'information society', to colonise the previously 'disruptive' discourse of gaming within the acceptable discourses of 'education'. In this representation of the child-gamer, rather than showing a child in danger of corruption from the influence of new technologies, instead we are presented with the child effortlessly mastering the skills required to cope in the new age of digital technologies. Indeed, it is in the analysis of children's computer games play that we also see the recurrence of terms previously used by some academics in 1997 to argue for a re-evaluation of the skills and competencies required by education in late modernity. For example, computer games are reported to enhance children's media literacy skills:

Children's familiarity with new media, such as video games, made them more media savvy than most adults (Travis, 2001)

They are reported to be developing collaboration and problem solving skills:

"Play always has value," says Dr Chris Smith, senior lecturer in psychology at the University of Central Lancashire in Preston, "but there are so many variables involved, it's hard to be specific. Something as simple as Pacman improves motor co-ordination and ought to have an impact on problem-solving in general," he says. "The research seems to suggest computer games are useful in terms of computer literacy, and there's a limited amount of evidence that (playing computer games) leads to academic improvement. Collaboration using computers is beneficial." (Schofield, 2001)

Games are implicated in a wider mix of technological factors argued to be increasing IQ levels:

According to research published today average IQ scores in Britain have risen by 27 points in 60 years. Similar increases were noted in 20 other countries, including Israel and the Netherlands, where test scores rocketed 20 points in 30 years. Scientists say the increases are linked to the fact that we are now spending hours watching television, surfing the Internet and chatting to friends via email and mobile phone.[...] We are also more likely to spend our leisure time on computer games, solving puzzles or driving. (Clark, 2001)

Moreover, Home Office research of the period is reported as making the case that computer games play leads to increased chances of economic success in the future:

A Home Office research review published last month demonstrated that children who play computer games for at least 45 minutes a day are more likely to go to university and get higher-ranking jobs than their non-gamer peers. Although branded as geeks, it seems likely that techie teenagers will have the last laugh. (Barr, 2001)

Rather than conceiving of games as a distraction from the 'serious business of preparing our children' for tomorrow's world (Blunkett, 1999), a parallel articulation seems to be emerging in the news media of this period which equates computer games play as equipping children more effectively for the challenges of the digital society than the formal education they might be receiving at school.

Video games are perfect training for life in fin de siecle America, where daily existence demands the ability to parse 16 kinds of information being fired at you simultaneously from telephones, televisions, fax machines, pagers, personal digital assistants, voice messaging systems, postal delivery, e-mail and the Internet. (Herz, quoted in Varadarajan (1997)

This trend, when associated with the articles on home-schooling mentioned earlier, begins to produce the home not as an extension of the educational assemblage, but as a competitor to it. In its rich, multi-media, entertainment resources, the home is presented, by advocates of educational reform and the computer games industry, as a site which is redefining the educational practices of the information society. We can thus extend the relations of equivalence and difference created in the Hargreaves/Rose piece of 1997 to include games environments:

<i>Home</i>	<i>School</i>
<i>Games</i>	<i>Information software</i>
<i>Diverse sources of information</i> <i>(information technologies)</i>	<i>Single source of information</i> <i>(teacher)</i>
<i>Multi-modal literacies (games)</i>	<i>Language (books/web)</i>
<i>Situated learning (games)</i>	<i>Didactic learning (teacher-centred</i> <i>classrooms)</i>
<i>Post-industrial</i>	<i>Industrial</i>
<i>Personalised</i>	<i>Mass</i>
<i>Information age skills</i>	<i>Industrial age skills</i>
<i>Creativity and maturity</i>	<i>Submission and reliance</i>
<i>Future economic success</i>	<i>Future economic failure</i>

One solution to this ‘double-vision’ of children’s games play is ultimately the emergence of a new breed of education-game hybrid:

An effective strategy at home is to provide games which have maths at their core. Then the maths practice is not really noticed but you can see what progress your child is making and which areas they find tricky. Children love computer games and software publishers are using this to develop maths software that children will really enjoy. There are some particularly good maths games for children which help them to practise the basic skills they learn at school. (Mitra, 2001)

The very emergence of this hybrid, however, produces childhood as a site of consumption, and children as knowledgeable and informed consumers of digital technologies; able to compare the ‘educational’ offerings of their home computer against their ‘leisure offerings’. The resources of the educational establishment that are intended to ‘come[] down those cables, into those computers and into the mind of the child (Blair, 1996), therefore, will not meet with a compliant child, but a critical and discerning one who will evaluate the resources on offer against the offerings of the commercial marketplace. This representation of the child-consumer produces the home and school in the digital age, not as articulated seamlessly, but as potentially in competition with each other. Reciprocally, adults are represented as ‘marketeers’ for educational and other activities. The child in this discourse, is presented as a social actor, but that agency is intimately bound up with relations of consumption.

6.5.4 *The wandering child in the new world*

the control of spatiality is part of the process of defining the social category of ‘youth’ itself (Massey, 1998)

A central proposal of the Stevenson Report was the assignment of an individual email address to each child over the age of 9. This proposal, it was argued, would radically change children's relationships with technology and, in the interpretation offered by Heppell in the news coverage in 1997, would enable children to adopt new identities which would see them engaging in adult activities such as 'working in the same co-operative and dynamic way that go-ahead businesses use the Internet'. Or, in the more restrained tone of the report, would see children able to 'access educational resources whether from home, school or library'. Email and Internet technology were essential elements of the new educational assemblage that would link homes and schools through the child-computer user. In 2000 and 2001, however, this proposal was confronted by a much older set of principles defining the practices and limits of childhood experience.

If we step back for a moment and consider again the emergence of the dominant framework of childhood, at its heart was the production of childhood as a 'quarantined space' protected from the adult world (Ariès, 1976). As Cahill has argued

the familiar tale of childhood's history in Western societies is a story of the sequestering of the young for what increasing numbers of their elders came to see as the young's own good (Cahill, 1990: p392).

By the late 1990s, the policing of children's movements in space was intensifying: there were not only the longstanding legislative restrictions on where children were allowed to go (age is a criteria in determining access to a range of public sites (cinemas, bars, cafes etc) (Cahill, 1990; Massey, 1998)), but curfews for children under the age of 16 were beginning to be implemented and considered socially acceptable. These were presented not as a restriction on children's right to access public space but as:

A case of alerting people to the dangers that children face. Children are at risk from drug dealers and paedophiles and people in some areas complain that they are threatened and harassed by youngsters. The initiative is child safety and the good of the entire community and we dare not lose sight of that. (Police Superintendent, The Observer, 12 April, 1998)

Geographers in recent years have clearly demonstrated that 'childhood' is produced not only through the practices of family, schooling, medicine and law, but through the management of children's access to different spaces. Central to the maintenance of 'childhood', is the construction of public space as 'risky' for children, a construction which is achieved primarily through the representation of non-familial adults as a threat to children⁶⁰. The home is represented as a site of safety, a private sphere in which the physical limits of walls, ceiling and floor and the population of the home by people who are known to the child are represented as protection against risk (Harden, 2000; Slater, 1998; Goffman, 1971).

In 2000 and 2001, the proposal to connect children to the Internet via the school and home for educational purposes was confronted with this longstanding construction of childhood as necessarily separate and protected from the adult world. What occurs during this period is a profound and sustained resistance in the media to a reconstruction of childhood as mobile, and to the home as permeable to outside influence. And the focus for this resistance is the nature of children's use of the Internet.

In 2000, two significant events occurred of relevance to this process. The first was the murder of Sarah Paine by a paedophile who had accessed child pornography on the Internet; the second was an 'investigation' reported in the press and on television by Carol Vorderman of the grooming practices of paedophiles using the Internet. At the same time, the 'Wonderland' gang of notorious child pornographers, was arrested and, in January 2001 were convicted and sentenced. Throughout 2001, we witness the emergence of a new hegemonic bloc which forms specifically in order to constrain children's mobility on the web and which overwhelms alternative attempts to construct new relationships between children and adults via the Internet. This process is achieved, first, through the production of a new narrative of 'stranger danger' on the Internet; and second, by the mobilisation of political, legal, technical and discursive elements intended to constrain children's access to the web.

⁶⁰ The alternative narrative, of the risk to children in their own homes (600 children dying per year in accidents in the home) is underrepresented in the stories we tell of the dangers and threats to childhood (Harden, 2000, p44-45)

An important historical context for this discussion was the 1997 US Supreme Court 'cyberporn' case, which considered whether to overturn the congressional bill constraining publication of pornographic materials on the Internet. This case was constructed in the press as a conflict between children's and adults' rights. One article of the period summed up the debate as 'should kids be forced into an adult world, or should adults be forced into a kids world?' (No Byline, 1997a). Whatever the outcome of the decision, however, the spatial organisation of childhood would no longer be the same as children and adults would be 'forced' to share the 'virtual space' of the web. The decision of the court was to rule against congress and uphold First Amendment rights to free speech on the Internet⁶¹ (to support adults rights) a decision which was effectively to 'privatise' the management of children's access to these new spaces in the practices of the home and family, rather than through regulation by the state or by the technology industry.

In so doing, this decision effectively 'opened up' the home as a new form of public space via the Internet. As Lupton has argued, the introduction of the Internet into the domestic setting raises the potential for a destabilisation of the home as a site protected from the outside world⁶²:

....the main anxiety here is in the insidious nature of contact with others through the Internet. The home is now no longer a place of safety and refuge for children, the computer no longer simply an educational tool or source of entertainment but is the possible site of children's' corruption. 'Outside' danger is brought 'inside', into the very heart of the home, via the Internet. (Lupton, 1995, p.110)

Indeed, one of the campaigners at the Supreme Court was reported as saying 'I didn't invite these things into my home. I don't want them to be invading my space' (Thomas, 2001)

⁶¹ This court battle saw interesting articulations of social groupings, as defenders of civil liberties were allied with Republican businessmen to the same cause.

⁶² This concern about the increasing permeability of the home environment could be said to have a long history in debates about children's protection from malign outside influence. Social historian, Lynn Spigel has shown, for example, how television was subject to similar discourses 'Metaphors of disease were continually used to discuss television's unwelcome presence in domestic life..., magazine writers worried about the unhealthy psychological effects that television might have on children. Indeed, if television was hailed by some as a way to keep children out of dangerous public spaces, others saw the electrical environment as threatening extension of the public sphere' (Spigel, 1992, 194)

In the apparent absence of any form of state regulation of the Internet, then, it was parents who became the focus for managing children's new navigation of these spaces. And it was directly to parents that the narratives of stranger-danger in 2001 are addressed. If we consider the tone of these articles, for example, they employ a form of direct address which locates the issue as a matter of the reader's (parent's) personal responsibility. Consider, for example, the repetition in Vorderman's article: 'your child is just three clicks away from a paedophile', 'your child is just three clicks away from Jim and men like him', or Martin Wroe's assertion 'nobody will watch out for your child unless you do'. Parents, in this discourse are produced as embattled and isolated, confronted with a dangerous world and new responsibilities.

*Question: what is the difference between the Internet and an airport?
 Answer: both take you to exotic destinations but not many parents would drop their offspring off alone at the airport with a World Traveller ticket.
 (Wroe, 2001)⁶³*

There are a number of typical storylines relating to this issue in 2001; first, the first person narrative in which a journalist or media celebrity (Vorderman) recounts their experiences in cyberspace posing as a young child. These stories deliberately draw on techniques from fiction writing: consider, for example, the opening sentence of Vorderman's account

The first voice I hear is that of a paedophile 'grooming' a child for sex⁶⁴

or the build-up of anticipation ('quiet', 'so far so simple') in the introduction to the Observer's article:

*The computer was already switched on in a quiet corner of The Observer's London offices. I picked a search engine at random. So far so simple
 (McVeigh, 2001)*

The second storyline is an account of a child's 'near miss' or real experience of grooming and paedophilia, these usually conclude with an appeal to parents not to allow children to use the Internet unsupervised:

⁶³ Clearly, the readers who are expected to have home computers are also the readers who are expected to have funds to travel around the world for this analogy to make any sense.

⁶⁴ See Appendix 10.4 for the full text of the Vorderman article

The frightening thing is that men you wanted your children to avoid might already be in touch with them right under your nose and in your own house. He could be in your computer. You just don't know. (Owen, 2001)

The final storyline consists of court coverage: there are the numerous articles covering convictions of child pornographers and Internet paedophiles during the year – these usually first appear as descriptions of the charge against the defendant, then re-appear at the time of sentencing, thus duplicating the number of potential stories and offering an opportunity to repeat the description of the crime. In total in 2001 there are at least 276 articles on child pornography or paedophilia on the web.

Again, however, we need to understand these articles within the context of the newspaper industry, and to see them as complex interactions between writers and their audience. The structure of these articles is typified by the production of a problem (paedophiles on the Internet and children's natural technical facility with computers) and the generation of a solution. It is the solution which is of particular interest in attempting to understand the prevalence of these stories in this particular year and their implication for the reconfiguration of childhood practices in the field of technology.

The problem-solution pattern in these texts resolves itself in these articles into three types of solution: in the first, the solution offered is the 'campaign' currently being run by the newspaper or (in Vorderman's case) the individual journalist, which will generate government action to protect children; in the second, the solution offered is technical: filtering and 'nannying' software is presented as a means of protecting children; in the third, the solution offered is advice from experts, mediated by the newspaper, offering strategies that parents can adopt to manage children's Internet use. All three solutions are driven by particular interests: the first and third solutions are focused on the establishment of loyalty and trust between the readers and the newspapers (newspaper campaigns typically increase circulation); the second solution is focused on the marketing of new consumer products to the home. This argument does not suggest that paedophilia on the Internet does not exist, but does suggest that there are reasons why PR companies

and newspapers would have an interest in heightening parental fears around these risks to children.

At the same time, the dialogic nature of newspaper articles (their role in an ongoing 'conversation' with their audience) is also significant. These texts specifically address their readers as concerned parents with relatively limited understanding of computer technology in comparison with their children. In opposition to their readers ('you' the parents) the articles represent the paedophile stranger as technically sophisticated. In so doing, they produce the 'adult' world of the Internet as one which excludes 'parents like you'; instead, the only adults presented as using the Internet are those who would cause harm to children. When we combine this with the problem-solution format of many of these articles, the 'solutions' which are proposed necessarily have to be those of constraining children's interactions with any adults online.

A very specific historic bloc is consequently constructed which has as its goal the attempt to create 'children's spaces' on the Internet and to eradicate the ambiguity in children's spatiality that was opened up by the Supreme Court's decision to allow children and adults to occupy the same space.

The discursive and material elements that go into the construction of this historic bloc are substantial. In the first instance, we witness all the forces of the media combining to generate campaigns to protect children online, from the News of the World's 'Campaign for Sarah', the Sunday Times Surfsafe2001 campaign, Carol Vorderman's one woman 'taskforce', to the Sunday Mirror's 'Protect Our Children' campaign. These campaigns are allied with particular software 'solutions' to this issue, for example, the SurfSafe2001 campaign

...invites readers to download a pioneering software programme called Wordwatched which, for a free two-week trial, will shadow your child's Internet journeys and enable you to see if he or she is at risk (Wroe, 2001)

The News of the World offers:

...a desktop image that sits on the screen of your computer whenever it is switched on that schools and parents can download onto their PCs to spread the

safety message. Called Chat Wise, Street Wise, it will stay on your screen and offer simple advice on how children can use the Internet safely without making themselves vulnerable to preying perverts (Sutton, 2001)

We then see television programmes focused specifically on this issue, for example, Vorderman's ITV programme with Trevor McDonald. In March, questions are asked in the house of commons of the Prime Minister. Into this assemblage are brought academic researchers, specifically the LSE's study of children's home computer use, and their findings are mobilised as justification for action. Statistics are bandied wildly around – for example, the Prime Minister's question cited a figure of one in five children having been approached by a paedophile online, a figure repeated widely in the press but, when a correction of that figure was offered by the MP in question, only one newspaper reported it. The Home Office commissions a survey, and an Internet Task Force is established by the government (to which Vorderman is invited to become a member). Coronation Street is persuaded by this task force to run an 'Internet grooming' storyline which is then the focus of press attention, and becomes the subject of numerous stories. The UK and the EU invest significant funds in the establishment of high tech crime units, dedicated to tracking down online pornographers, and the early stages of bills to prevent online grooming are mooted in the committee rooms of the house of commons, bringing together the Home Office, the Education Department and both the government and the opposition parties. Proposals from the task force include the establishment of 'kite mark' systems for online content, effectively giving age ratings to different parts of the Internet; and the establishment of new 'children's only' online spaces. It is in 2001 that the Stevenson proposal to offer emails to individual children is definitively shelved, and along with this come new guidelines for schools not to put children's photographs on school websites or to allow children to be named in public websites. It is in 2001, that a raft of new 'children's only' spaces are created on the web, to which no adults are allowed access.

The consequence of all these actions is to produce a new consensus around the separation of children's and adults' activities on the web and to limit, where possible, children's access to the Internet to one of consumption rather than interaction. These processes are an attempt to colonise the new practices of the

Internet, to constrain the newly wandering child – as always, with the caveat that this is for children's 'own good'. Its effect, however, is to produce virtual space as a site in which, as in physical space, childhood and adulthood are defined by geographical boundaries. The consequence of this, however, may be perhaps to increase the risks to children. Where 'childhood' is conceived of as a separate space from adults and where responsibility for children is privatised to the parent/child relationship, is it possible to conjecture that children are 1) thereby rendered both more visible to those who would do them harm, 2) removed from the company of the wider body of adults who would share responsibility for children and 3) deprived of the tools and skills that they might develop to enable them to occupy the world at relatively reduced risk. This is only conjecture as there are no easily accessible examples of such 'mixed' adult/child societies that would allow us to examine this hypothesis empirically.

What did this process do for the adult/child relations in this period? In the first instance, it reasserted the authority of adults to constrain children's (albeit virtual) mobility; it reinforced the geographical and spatial construction of childhood as a separate space from adulthood; and it served to construct children's expertise with technologies as a threat to themselves which should be constrained. The very few voices speaking against this process in 2001⁶⁵ could be easily dismissed by the equivalences established in the dominant narrative of 'stranger danger' which produced childhood independence and expertise as synonymous with childhood risk.

6.6 Summary

This chapter highlights the hegemonic struggle to 'fix' the meanings of children's interactions with digital technologies at this period. While in some areas we witness the colonisation of new practices by older discourses – for example, children's Internet access within the spatial construction of childhood, or digital technologies within a re-establishment of teacher and educational authority. In others, we witness the emergence of new practices that potentially challenge traditional configurations of childhood – the emergence of new relations between parents and

⁶⁵ Remember the political and media approbation heaped upon Chris Morris' 'Brass Eye' paedophilia programme in 2001, which attempted to parody the press hysteria around child abuse in this year?

children around technologies in the home and the construction of children as 'expert consumers' positioning educational and leisure activities in competition with each other.

We have also seen that the 'common-sense' understandings of childhood and technology at this period are produced not in a single text, but in the gradual accretion of meaning through collocations and synonyms, and that these 'common-sense' understandings act as a battleground around which different social actors are positioned within the ritual narratives of the media field. The 'digital child/cyberkid/digital generation' comes to achieve the status of a discursive 'nodal point', acting to mobilise assumptions of childhood's 'natural' affinity with technologies and concomitant fears about that relationship linking ill health or anti-social behaviour.

The analysis leads to a concern about the quality of national debate surrounding childhood and technology: the debased level of argument to which these articles often fall, the establishment of polarised oppositions, the appropriation of research findings to meet the needs of 'news' generation, the blurring of boundaries between PR, advertising and reporting, the manipulation of social concerns to increase readership and reader loyalty. All of these features raise significant doubts about the extent to which 'the media' is serving its public in debating the relationship between technologies and childhood. It leads to the establishment of hegemonic blocs whose struggle is conducted on the traditional terrain of the dominant framework – the concept of the child as 'future worker', the concept of the child as 'dependent and separated from adult life' - and which produce relations of equivalence between groups with distinctly different political goals. The ways in which we might consider getting past some of these obstacles will form the basis for discussion in Chapter 8. For now, however, I turn finally to the discourses of children and technologies in the interview texts produced as part of a research study of families of the period.

7 Ideas of childhood and technology in the domestic sphere 1998-2000

Imagine, if you will, a home PC that keeps track of family members' use of the machine. It learns that Mom always checks the news headlines, but is also interested in gardening. First thing in the morning, Dad wants an update on local traffic and business headlines. Later in the day, he would like to check the football scores and the prices of stocks in his portfolio. The PC will automatically collect this information from Internet sources and synthesise it to create brief "headlines" on his "start page". The children use several programs to do their homework, but if they can get away with it will play computer games first. The PC will automatically block entry to these games on school nights, if the parents set the rules. (Kehoe, Sept 13, 1997)

7.1 Introduction

In the previous two chapters I have discussed the discursive struggle to 'fix' the meanings of children's interactions with technologies in the late 1990s in the political and media domains. In this chapter I turn to an examination of the ways in which children and technology were represented by parents and children in interviews with 16 families conducted in the years 1998-2000, and the hegemonic struggles which played out in these discourses. The analysis in this chapter adopts a number of complementary viewpoints; first, it understands these interviews as sites of recontextualisation of the discourses of the print and media fields; second, it sees these interviews as generative of discourses of childhood and technology in this period; third, it sees them as 'windows' through which to engage with the practices generated by families in response to their ideas of childhood and technology at this period.

These families can be understood as the focus for concern of actors in political and media fields – it is to 'parents' that many of the discourses of childhood and technology are addressed. As a result, I have a keen interest in understanding how the parents recontextualise, appropriate and colonise these 'public' discourses. At the time of data collection, however, we were not concerned with the media resources these families drew on in their discourses of children and technology, as a result I am not able to track the direct 'interdiscursive chains' which might operate between media and family fields which is characteristic of much 'audience effects'

research in media studies (see for example, Brunsdon and Morley, 1980). Instead, I will focus on the examination of how 'commonsense' ideas of childhood, as presented in the media and political fields, were referenced as resources by parents in shaping their discourses of childhood. The analysis draws also on my observations of the families and their environments during this period, bringing in contextual ethnographic information to complement the interviews where appropriate. This latter approach is informed by previous research into the introduction of technologies into domestic settings which have suggested that the 'recontextualisation' practices of the home may operate in non-linguistic ways; for example, commentators have argued that the spatial organisation of the home provides a reliable insight into the 'meanings' families produce for new technologies (Silverstone and Hirsch, 1992).

At the same time, the family sphere can be understood as, in its own right, a site of origination of discourses of childhood and technology at this period. It is in reference to their own families, for example, that politicians, journalists and other commentators often make a claim to be able to speak about and speak for children and families. As a result, I have an interest in identifying what 'new' representations of childhood emerge in these families, and in understanding the extent to which the representations of families in political and media texts are similar to or different from those of the diverse families I interviewed. Previous researchers have argued that the introduction of such technologies into the home is a process of 'incorporation' of these technologies into the existing 'moral economies' of the household, a process in which the uses and meanings of these technologies are managed in such a way as to fit in with the values and practices of individual families. These technologies are seen as acting as a medium through which a family represents its values to itself and the wider community through establishing boundaries with the outside world, through negotiating differential access for different family members, and through maintaining or challenging the established routines of family time and practices (Silverstone and Hirsch, 1992)

Finally, these families also act as sites for the contestation of ideas of childhood – what hegemonic blocs (if that is not too loose a use of the term) emerge within households? What alliances are formed, and how do different family members

appropriate different elements of discourses of childhood and the information society to their own 'causes'? As Ehrenrich has argued, 'the family, so long reified in theory, looks more like an improvisation than an institution' (cited in Furlong, 1995:175). Just as the family 'works on' the meanings of the computer in its midst, so too, does the computer function as a site around and through which families come to define and shape themselves. And after all, of all of our sites, it is only in the family home that children have a voice in articulating and potentially mobilising their own 'commonsense' representations of childhood and technology.

The chapter therefore focuses on the processes of articulation, recontextualisation, hegemony and colonisation/appropriation in the discourses of childhood and technology reported by parents in the interviews with 16 families of this period. In order to provide an insight into the rich diversity of different family practices of the period, and the ways in which children's technology use was articulated with other family practices and networks I provide (in Appendix 10.6) detailed charcoal sketches of six of the families I interviewed and visited. I will refer to these where appropriate throughout the following discussion.

Before beginning the discussion, however, I want to 'recap' the sensitising concepts which the analysis in the previous chapters offers: this analysis suggests that at this period there was an attempt to articulate the home with formal educational practices through the use of the computer and a reciprocal opposition to this practice based on concepts of 'the basics'; it suggests the potential 'privatisation' of educational provision through technology use, and the possibility that this has been articulated with neo-liberal discourses which may have negative implications for families without the financial resources to equip themselves with appropriate educational resources; it suggests the emergence of the home as a site for the development of new educational relationships between parents and children in 'learning teams', and hence children coming to act as teachers and advisors to parents; it flags up potential changes in child identities – with children conceived as 'experts' and 'consumers' and the emergence of an 'expert child' acting in adult domains through computer use; it suggests that media and political discourses constructed children's navigation of the Internet within the framework of traditional separations between 'children's and 'adult' spaces; it also suggests the

emergence of the computer games machine as a potentially subversive and disruptive element of children's relationships with technology that needed to be managed through prohibition or through articulation of games activities to educational objectives. The following discussion will provide an analysis of the orientations of these families to these concepts, and the ways in which they challenged, appropriated or even generated these discourses in their representations to me of their family practices in the home.

7.2 Recontextualising public discourses

As the detailed case studies (in Appendix 10.6) of the 6 families clearly show, the 'recontextualising principles' in operation in each of these families differed according to family cultures, family economic circumstances, and family histories of computer use. The J family, for instance, were keen advocates of outdoor activities, the father was the local scout survival expert, the mother a secretary for the scout group, and the father's relationship with technologies can be summed up as one of mistrust:

I was taught you can have all the technology in the world, but what it'll finally come down to is two men climbing out of a deep hole, sticking a knife on the end of the rifle and running towards the enemy. (Mr J)

The computer in this household was represented as a necessary modern evil, to be tolerated rather than accepted. In contrast, the C family saw the computer as the latest in a long line of gadgets to be explored. The father in this household was a keen DIY expert, whose many projects included wiring up all 6 televisions in the house to play satellite and videos from a central point, and working with local skip companies to fill in a massive hole in the garden in order to quadruple its size. Here, the computer was another 'project' that the whole family (in varying degrees) were involved in, with weekly pieces of software to be mastered. In contrast again, in the M family, the computer was bought as a present for the youngest daughter after her father's death, and was seen as a way of making the most of her more academic abilities. The computer was seen as a way of K escaping from the types of work (shift work on an assembly line) that the mother and older sister were involved in:

I just sit and watch K and I just haven't got a clue. I wouldn't even know how to switch it on. So I think they should have the chance to use a computer [...] So whether it's schooling or job or... I mean I'd prefer to see K using a computer for a job than stuck in a dead end job like I am. You know, I'd prefer her to do something better (Mrs M)

In contrast again, in the S family, the computer was seen both as an educational tool and a means of occupying the children in the home and stopping them from 'going astray' unsupervised away from the home:

At last I thought, why not? Why not? It's for the small ones as well, they use it as well. It's a good pastime, because I'm so busy I don't have time to take them out. It's only on special occasions like it's a good film or if the weather's good I take them to the park or something which... we don't have much social life you see, because we're strict Muslims as well [...] So they'll have these things to keep them occupied which is good (Mrs S)

The economic conditions of each household also differed. The W and G families were professional households, with good incomes which allowed them to purchase the latest computers with all the necessary peripherals. There were other benefits to professional occupations as well, as the fathers were able to bring home 'spare' computers from work for children to play on, to access printer and paper supplies. In contrast, the S and J families had little spare income. In the S family, the scanner that had come with the computer had broken and they had been unable to fix it, the 'helpline' offered by the computer company being too prohibitive in cost for them to access; while the J family's computer was first bought for them second hand as a present from his grandfather, and then updated with spare parts from other computers.

This last point also emphasises differences in the family's participation in wider socio-technical networks which offered support both for the 'cultural' meanings of the computer and for the means of using it. In the C, G and W families, for example, the parents were part of workplaces where there was a 'technical team' who, through friendly conversation, could be used as support for any difficulties with the home computer. In the M, J and S families, however, there was no such professional support; for these families, help came through extended family networks (often remote and sometimes difficult to access) who acted as the 'family helpdesk' when things went wrong.

The ways in which the discourses of childhood and technology were appropriated within the discourses of each family, therefore, were particular to the specific cultural, economic and social circumstances and values of each family. At the same time, when we look at the children's computer use, and their own interests around this, these too provided differences *within* families in terms of their representation of the purpose and uses of such technologies; there were differences in gender around games within households, in age around schoolwork and the physical ability to fight to get access to the machine, there were differences in the resources each child had access to in the home.

As such, we could argue that the phenomenon of children's computer use is fragmented, characterised by difference and multiple in the ways in which it plays out in different settings. In so saying, however, we are in danger of endlessly proliferating narratives of difference, of opening up multiple perspectives and in so doing, losing others (Strathern, 1992). The focus for the following analysis, therefore, will not be upon the attempt to construct narratives of particularity, but to account for how these particularities relate and respond to, and are thereby linked with, the wider discourses of technology and childhood I have discussed throughout this thesis. The focus is upon the point of orientation to discourse, and it is through this, rather than through a proliferation of local accounts, that I hope to proceed. After all, as Sayer argues:

We do not need to flip from grand narratives to local knowledges, for they are implicated in one another. If there are big global structures or systems, the view from one local part of them is likely to be very different from that at another part: the Indian tea picker and the British tea drinker are part of the same system (though they belong to different systems too), but their viewpoints are radically different. This doesn't mean to say that they can have nothing useful to say, but that what they do say would be better if their standpoint were acknowledged. Nor does it mean that their views are purely local. Rather they are local views of something bigger (Haraway, 1991) (Sayer, 2000:75)

While these families cannot be considered 'interdependent' (as in Sayer's example of the tea picker and tea drinker) in that they are not formally connected to a larger system of inter-relationship, it is still possible to consider each of these families as offering (and working on) local views of a larger set of narratives. We can also

consider them as interdependent with the media and political fields – they are the ‘end consumers’ of the structures of meaning that are produced in these fields for childhood and technology. The following discussion therefore focuses on the families’ ‘orientation’ to and views of these wider discourses, in particular, to discourses of the ‘cyberkid as a natural computer user’ and of the home as an educational setting.

7.2.1 *Recontextualising the ‘cyberkid’*

The concept of the ‘cyberkid’, as discussed in the previous chapter, produces an ideological articulation of the body of the child with technology. It is a term which implies an ‘innate’ ability to use computers and comes to imply a ‘bonding’ between child and computer in ways which make it difficult for them to be considered outside this hybrid bodily-technical formation (for example, in terms such as screenagers, cybernauts, couch potato, dotcommunards). It is an underpinning assumption which informs many of the newspaper articles of the period and is understood as indicative of a distinct generational shift in the equivalence it creates between this particular ‘generation’ and ‘technologies’. Key ‘connotations’ of this concept are first, an equivalence between computer use and various forms of ill health and, second, an ideological assumption of children as natural and keen computer users.

In the families I interviewed, the concepts of the ‘digital child/cyberkid/playstation generation’ were not referred to explicitly (in that this particular vocabulary was not used), but the possibility of a childhood *defined* by and through technologies was one that the parents referred to repeatedly in their representations of the sorts of childhood they wanted to avoid for their children. Indeed, almost all the families associated over-use of computers as problematic and resisted the idea that childhood should be defined solely through use of technologies. Most passionate about this was Mr J, who viewed computer use as potentially leading to a debilitating hybrid of child-technology, and who actively discursively policed the boundary between the ‘human’ and ‘technological’ elements of life:

At the end of the day I will still have my legs so I can walk down to the library and look at the reference library. Or if the library hasn't got the book in I can

*get it sent to me from Taunton because I've still got a hand I can write with
instead of a fused together lump like that for tapping on the key*

This powerful image of a 'fused together lump' implies resistance to a reconfiguration of childhood as child-technology hybrid. While this may have been an extreme position, in the other families we saw a similar emphasis on ensuring that children were 'not reliant' on the computer for 'childhood'. Many of the parents, for example, were at pains to stress that their children were 'not addicted' to the computer, and that they encouraged them to spend time in other pursuits. Indeed, if we look at the children in these six families, we see that many of them preferred spending time involved in non-computer related activities, or at least actively enjoyed doing other things. Through providing either formal or informal leisure opportunities for their children, through limiting their access to computer technology (and television) and through initiating family activities which took the children out of the home, the parents were actively attempting to manage the articulation of childhood with technology as contingent and specific and to ensure that childhood remained articulated with a range of other activities (including, for example in these studies, scouts, long walks with the dogs, football, time with friends and family, shopping, etc).

The 'ideology' of the cyberkid (with its equivalences of computer use with ill-health, anti-social behaviour etc) could be understood to underpin many of these concerns, in that it structured the ways the families associated over-use of computers with negative effects, and mobilised parents' attempts to ensure a more diverse set of non-technologically mediated childhood experiences.

While parents may be actively resisting the articulation of the 'cyberkid' with 'lack of other interests/outdoor activities', the term 'cyberkid' can also be understood as an articulation of childhood with a 'natural facility to use the computer', as a 'bond' between child and computer that means they learn with little or no outside help. This articulation is evidenced in Blair's image of his children 'using that computer as easily as we read a book'.

This image was mobilised in a variety of ways in these families, in the first instance, and most notably by children themselves who, when questioned about how they

came to learn to use the computer, tended to describe themselves as 'just being able to do it'. It was only with prompting that the different resources (help prompts, friends, school, parents, practice) that went into this process of learning became visible. The ability to use a computer 'naturally' was maintained and supported by most children as a badge of honour, a birthright to which they were of course entitled. In reproducing the idea of the 'natural computer user' the children obscure the work involved in gaining this expertise: the child worker, who dedicates time and effort to achieving competence, is rendered invisible. In the process, the resources needed to enable this competence are also obscured, a process which potentially has implications for social practices built on the assumption that 'all children like and easily use computers', and for those children who find themselves without the resources to learn to use the computer. At this point, I need to flag up that, as part of the ScreenPlay project we also conducted a series of interviews with children who described themselves as low users of computers – either not having access to computers or not wanting to use them. When we talked to this group of children we saw the implications of this ideology of the 'natural computer user'. Children complained of teachers who went too quickly and assumed they knew how to use computers. Children talked about the embarrassment of not being able to access computers. At the same time, however, these children also promoted this ideology of the natural computer user, not for themselves, but by projecting it onto the next generation:

I think it's hard for us. The younger generation now....to get into computers. But like when we have kids it'll be just like really natural won't it? It'll be natural for them because they've grown up with it, but we haven't grown up with it.

(Boy, 13)

With the parents we interviewed, the discourse of the 'natural computer user' was more or less prevalent depending upon parental experiences of computer use. Those families in which parents understood how to use computers themselves were less likely to attribute 'natural' abilities to their children, and were more likely to render visible the ways in which their children learned. In contrast, in those families in which parents had little or no understanding of computers, children's abilities to use them were presented as natural, or even 'magical'. The 'ideology' of the natural computer user serves to create relations of equivalence and difference

between computer users and non-computer users which are produced on the assumption of 'innate ability', rather than an awareness of the conditions of their experience of and access to technologies. It is an ideology that could be understood to reinforce rather than challenge existing patterns of technological expertise, in that it acts to establish these different forms of knowledge not as socially produced, but as innate. As such, we might wonder whether the habit of mobilising the ideology of the 'natural computer user' is the most effective strategy in encouraging 'adults' to learn to use computers, as some politicians have done:

Our children are already moving into the digital future. They are quickly mastering the tools that they will need for the new century. Some of us need to catch up. (John Battle MP, Hansard, 11.07.1997)

Similarly, we need to ask whether this ideology of the natural computer user serves to produce relations of inequality between different groups of children. If a child cannot use a computer, in this conception of the world, then it is not because of any social conditions, but because they lack an 'innate' ability which, given the close articulation of childhood with technology, comes to mark them out, by implication, as not 'normal' children.

7.2.2 *Recontextualising the home as an educational setting*

The production of the home as a 'natural' extension of the school through the computer is a key ideological articulation underpinning the creation of consent for the production of the home as a site for children's work, for parental appropriation of formal educational roles, and as a key element in a school-home network of practices. What, then, were the orientations of these families to this concept, how did they appropriate or become colonised by this discourse?

At first sight, it would seem that many of the parents had indeed internalised these discourses, and that the 'educational home computer' was being accepted as a necessary element of the domestic landscape. All of the families, for example, attributed their purchases (or upgrades, in families where computers were already present) of home computers to educational objectives:

Because we needed it for school. Because most of the people in school have got them and they're really good, because they're happy with their education and that (N, 14, S Family)

We had said really for J's sake that he ought to have it so he can glean stuff off the Internet, because otherwise at school when it comes to school projects he was always at a disadvantage [...] I was at school myself and I was waiting to see a teacher with J and one of his friends came past and he said 'Have you done your homework from last night?' and James said 'yes'. And the lad said 'this is what I've done', and it was all computerised and it was all beautifully done and there was J's just like an ordinary essay. (Mrs J)

My own thought was that they would use it for looking up information for homework, we'd be able to buy encyclopaedias and things like that. (Mrs C)

Indeed, all of the children at some point used their home computers as an extension of formal schooling practices – for homework, for additional revision, for looking up information.

This construction of the computer as an educational resource was also underpinned by the ways in which families organised access to the computer in the home – privileging access to those who had homework to complete, setting up the computer in a quiet space away from family distractions, usually only placing one chair in front of the computer to encourage single use, in some cases, locating the computer near other books and information resources. At the same time, we saw parents involved in a number of interactions with their children to support their educational use of the computer, whether 'trouble-shooting' the computer technology, helping their children to use the computer and find information, or, in the W family, typing up children's homework.

There were, however, clear differences in the resources that parents could bring to bear on this practice; while some families were well resourced in terms of both technical expertise and educational experience and therefore able to take on the role of 'teachers' in the home, other parents, notably in the S family and the M family, saw both schooling and the computer as an activity in which they could not participate. While the discourses of extending the school into the home may have achieved the status of 'common-sense' in family discourses, therefore, the ways in which this practice was realised in different homes was profoundly patterned by educational and cultural capital, and by financial resources.

The discourse of the 'educational home computer' however, was not simply a 'colonising' discourse, instead, we saw in its entry to the home that it was subtly changed and challenged by some of the families. If we return, for a moment, to the ways in which the 'educational computer' was constructed in political discourse of the period, we see that this meaning was achieved through the articulation of the educational computer with 'access to information' and with 'preparing children for the digital age'.

Children cannot be effective in tomorrow's world if they are trained in yesterday's skills [the Grid will] make available to all learners the riches of the world's intellectual, cultural and scientific heritage(DFEE: 1997)

This articulation opens up the possibility for some families to begin to construct alternative articulations of the home with education.

In the first instance, the articulation of the 'educational computer' with 'information', led to some families constructing the home not as an *extension* of the school (in that the home would simply allow children to continue working as they were at school), but as a competitor to it in defining children's future success in the information age. The home was seen by some as compensating for a *lack* in the school setting, specifically in relation to children's access to information via technology:

They keep saying computers is no good without Internet because you don't get information a lot. I said 'Well, we'll buy information'. We'll go and buy a disk (Mr J)

The reason why I brought it, one of the reasons I bought it was for these two really so they could grow up with computers. Everything's going that way anyway, so the sooner they can get along with it really. I know that obviously there's computers at school but there's only a limited time, whereas they can come here and mess about (Mr S)

If 'education' is equated with 'access to information'⁶⁶, and if computers are seen as the information resource 'par excellence', then the home, with lower ratios of child:

⁶⁶ At the same time, this production of an equation of 'education' with 'information', serves to produce children in the position of consumers of knowledge rather than producers. The construction of the NGFL as a 'web of resources', and the exclusion from the NGFL proposals of provision of email access, creates an articulation of educational

computer access, becomes conceived as a better site of education than the school. If families are to compete, if they are to ensure their children don't fall behind, then investment in the home computer is produced as essential. Rather than the state managing educational risks in the information age, then, it is the families who are taking on this role, a role that fundamentally challenges the primacy of the state in educational provision⁶⁷. While none of these families were suggesting withdrawing their children from formal education, this articulation of the home computer with privileged access to information, begins to challenge the historical production of the school as the primary source of knowledge in society.

More significantly, however, we saw the articulation of the 'educational computer' with 'preparation for the digital age' being very differently recontextualised in our families, in ways which produced structurally different relationships between certain families, education and technology. Central to these different processes of recontextualisation was families' different understandings of what 'preparation for the digital age' might mean.

In some families (mainly, but not exclusively, families in which parents had little experience of using computers in the workplace, and few formal educational qualifications) education for the 'digital age' was constructed primarily as the acquisition of technical 'operational skills' which did not challenge educational goals and values. The focus was on the use of the computer for access to

technology with consumption of information, and of learning as downloading. In those families where this model was appropriated into the home, we saw a greater emphasis on the home computer as information resource than as production tool. But notably, in all households (of the 16 total we interviewed) there were only two in which children were themselves involved in using the web to communicate their ideas of the world. In one, the boy involved had created an online magazine; in the second, the boy was creating a family website, with pages for all his family. These uses of the computer, the idea of the child as 'active producer', were achieved in the face of, rather than with the support of, the discursive production of the computer as an educational information resource.

⁶⁷ This is not to suggest that this privatisation of management of educational risk is something new – whether through parents buying private education, moving house for good schools or providing books and help with homework, this is a process that has been ongoing for years. What is interesting in respect of the computer in the home, however, is that (in particular constructions of education as 'information') it becomes possible for parents effectively to bypass the state as an educational resource other than for examination purposes which are also complicit in this agenda at present, premised, as most assessments are, on the reproduction of bodies of content knowledge (the sort of learning seemingly easy to achieve with a good memory and access to a computer)

information, better 'presentation' of schoolwork and acquisition of 'computer literacy':

I think that's good, it's good. Plus as you know everything's computers nowadays. Office, computer, everything is... the file bit is gone now, everything is just done on the computer, your records, everything. So I think it's because the more they learn the more experience they have. Offices, everything is just computers

Having a computer at home meant being better able to use a computer. In these families the production of computer use as a 'basic skill, as an efficiency tool and as capable of being introduced into education without profound challenges to educational practices coincides with the dominant representation of digital technologies offered by Blair and Blunkett in the political discourse of the period. The responsibility of the parents was to ensure that their children did not get left behind in the basic skills race of the new economy.

In contrast, however, the two families in which the fathers had higher degree qualifications and were professionally involved in organisations characterising the 'knowledge economy' (engineering and strategic consulting), argued for a redefinition of educational goals and practices in the context of 'the information age'. Their interpretation of what 'preparation for the digital age' means was profoundly different. In the first instance, one father constructed 'successful adulthood' not only as being able to use the computer, but in essence, coming to delegate to the computer certain menial tasks:

It's because the way I've been through engineering, you sort out a problem. And you don't have to have all complicated routes and have to know all the whys and wherefores. All you want is the answer. All you want is to solve that problem. With children at school, if the computer gives it to them quickly they know that, that and that, and that gives them that. And in real life that's what they're going to do. (Mr W)

This view of computers changing what 'the basics' are, shifting what an individual needs to 'know' and what can be delegated to technologies is in profound contrast with Mr J's view, which retains an emphasis on the primacy of the individual in working in and on knowledge:

...now if I sat there and I had all the Gray's Anatomies and that, everything round me and the exam paper was there and I went like that and looked at everything. Wrote it all down. All that proves is I can look it up in a book. Now I've got you on the operating table and I'm going to take out your appendix and the anaesthetist hasn't got you under properly because he learnt all his in a book and he left his book at home so he can't remember anything. You're thinking 'have I come to the right surgeon?' (Mr J)

The image of the disempowered surgeon suggests concerns about the blurring of the boundaries between individual and distributed forms of knowledge; while Mr J privileges the retention of the individual as repository of information, in contrast, Mr W argues that the ability to distribute 'information' across different technologies is precisely the essential element of success in 'real life'. For Mr W, the introduction of technologies into working life is not a simple 'efficiency' or 'modernisation' process, it is one which fundamentally changes what and how you need to know. At a time when schooling is increasingly reliant on the reproduction and retention of knowledge, this produces Mr W in an oppositional position to the current practices of schooling.

Mr W's argument is taken further by Mr G who argues for a substantial rethink in educational priorities and values; for example, rather than seeing the benefit in the home computer being related to schoolwork or to learning 'IT skills', he constructs his children's relationship with it as one which is facilitating the development of important lifeskills, such as playing with information and problem solving:

I think another important skill is being able to figure things out relatively quickly as well, you know. Even with games and things, you know, the fact that they can look at it and they can figure out they press this button here and they'd adjust something there depending which game it is they're working at that it then helps improve their performance of them using the game. Because I think it's a skill that not everybody has, I mean I can look at a computer and I can look at a program and it only takes me 5 or 10 minutes to figure it out [...] And I think that's an important skill as well. So even if they're just playing games and figuring things out for themselves I think the confidence to do it and then the sort of ability to just play with things until they get it right is very important [...] there's playing with it in such a way that actually gets to the end point that you want, that's the key thing you know. (Mr G)

Interestingly, of all the parents, Mr G was the least enthusiastic and encouraging of his children's use of the computer as an educational device, and the one most committed to ensuring they developed a 'playful' relationship with the computer.

The language Mr G uses is the language of the 'self-generative worker' – the problem solving, intuitive, responsive individual 'playing' with technologies. It mirrors the language of the LEGO paradigm outlined by Jenson (2005), and the DTI and DCMS's view of creativity, of adults 'at play' and learning as they go.

In different households, while ostensibly reproducing the discourse of the child as a 'future worker' and the home as an educational site, different families represent their children's relationships with technologies (both at present and in the future) as either those of 'operative' or 'self-generative' workers, depending on parental experiences of technology, views of the 'information society' and position in the workforce. We can see that while in the abstract the ideology of preparing children for the 'information age' enables the creation of consent in families for the appropriation of the domestic as a site for children's work with computers, this ideology also obscures profound differences in the meanings that different families will associate with their children's work.

This difference reinforces Gee's (1996) concern that a shift towards exploratory, child-centred learning would privilege certain children rather than others. But it also raises concerns about the New Labour first term policy of emphasising education as an education in 'the basics', in which computers are conceived primarily in terms of 'computer literacy'; this approach will do little to challenge the different identities created for children in different homes in respect of their future 'dispositions' towards work and learning in the information society.

7.3 Generating new 'ideas' of childhood

If we return to the ideas of childhood represented in the political sphere in the mid 1990s, what we saw was an attempt to 'manage' the unruliness of children's 'natural' abilities with computers, through a reinstatement of traditional relationships between parents and children, in which adults were understood as the primary source of knowledge and authority and children were constructed in relations of dependence upon them. Consider, for example, Blunkett's implication that a teacher asking a child for help in class was something that was 'beyond the pale':

We want to ensure that teachers will in the future be computer literate and that they never again have to ask their own pupils how to operate basic computer equipment. (Blunkett, 1997)

This discourse constructs the 'natural' relationship between teachers and pupils, and, by implication, between adults and children, as one in which the dominant framework of activity/passivity, knowledge/ignorance is maintained. How was this relationship represented in these families?

In three of the six focus families (but only in four of the 16 families we interviewed in total), the parents (specifically, the fathers) in the household could lay definitive claim to a greater understanding of computer use than their children. In these families we saw relatively traditional representations of the relationships between children and their parents as being ones in which parents would provide help, advice and support to children who were less experienced in this domain. In this context, the discourses of the dominant framework were untroubled in their recontextualisation into the home.

In other families, however, we saw the emergence of new ideas of 'childhood' and indeed of 'adulthood' as hybrid and relational formations. In the first instance, there were families in which the computer was constructed solely as the 'children's machine', where the children were seen as sole possessors of knowledge about how to use the computer. For example, if we consider the M family and the S family, in these households, the children were the only users of the computer and parents expressed no interest in learning to use it. Mrs M saw the computer as belonging to the world of work and schooling, and Mrs S, similarly saw no use for it in her life:

KF *now, have you ever gone on the computer?*

Mrs M *Not at all, no*

KF *never?*

Mrs M *I've never had an interest in them. I enjoy watching [K]. I will sit and watch but it never interested me*

KF *And do you use it at all?*

Mrs S *Oh no, no*

KF *Is it not something you're interested in?*

Mrs S *No, I don't think so no. I haven't got the time as well actually*

In these households, children's computer expertise was valued, respected and acknowledged as superior to their parents. This competence led to a view of childhood as *differently* able in different contexts. Indeed, in these households, the production of technologies as associated with the 'digital age', rather than with present needs, located the computer as necessarily within the realm of childhood. In the technological field, then, children were able to 'lead' the parents. This did not necessarily extend into a complete reversal of the dominant framework relations between adults and children in the home, however, instead, these parents retained their authority in other areas of life. They still retained authority in respect of children's health and wellbeing, and in respect of moral education; for example, the following quotation from the interview with Mrs S shows that there was a clear delineation of areas in which children were seen as expert (in relation to the computer) and those in which adults were seen as expert:

Mrs S I think, because they always talk to me about things, why this, and I explain to them, this is good or bad, why it isn't good, why it isn't bad

KF And then they explain the computer to you?

Mrs S Yes, they do. They always say if you buy.... This is good, this is bad, and we can have this and then this

In this context, the traditional articulations of 'adult with expertise' and 'childhood with ignorance' are problematised and understood as contingent. Expertise can be demonstrated in some domains, but not all, and the 'ownership' of expertise shifts between parent and child according to the domain under consideration. These articulations are seen as temporary, and to be mobilised in some circumstances rather than others. This produces an idea of both 'childhood' and 'adulthood' as hybrid, both expert and immature, both competent and needing guidance, and as emerging differently across different knowledge domains.

A second form of interaction in the home saw the development of new relationships between parents and children around the computer. For example, in the J family, Mrs J was trying to use the computer for work and was helped to use the computer by her son. To some extent the family was 'learning together' how to manage the new technology, drawing on a wide range of resources – from other

family members, to school ICT training, to friends and books and help manuals. Neither person was the 'expert', neither person the 'novice':

I like things to be dead right. And I'll say 'Oh can we do it a bit like that and a bit like that?' and a lot of the time, I have to say, its been over technical things hasn't it? Like changing the cartridge. Us having trouble changing the cartridge. It took us a long time to work that out. (Mrs J)

What is noticeable here is the use of the first person plural: the technical issues were a challenge to be faced together, it was 'us' attempting to sort out the problem. In these situations, the child was a collaborator, a team member. This approach produces relations of equivalence between children and adults in the face of new problems to solve. It creates a commonality across the generations. The 'idea' of childhood in these representations of parent/child relations is articulated *with* rather than in opposition to the 'idea' of adulthood. Standard adulthood in this context is being eroded.

Arguably, it was this new articulatory process, which conceived of children and adults working together on shared projects and concerns, which generated the idea of the 'learning team' which surfaced in the newspaper articles in 2001. The home, then, should be seen not as a site solely of 'reception' of discourses, but as one in which discourses, ideas of childhood and ideologies of childhood can emerge.

Interestingly, it was in those professional families which were promoting concepts of children as future 'self-generative workers' in which the boundaries between childhood and adulthood were more easily policed. This raises the question of whether, as adults become increasingly familiar with technologies, the momentary destabilisation of the strict boundaries between adulthood/childhood in ideas of 'hybrid' childhoods or 'learning teams', will continue in the future.

It is important to note, however, that ideas of adult 'competence' were frequently patterned by gender in these six families, and indeed in the other 10 families we interviewed as part of the study. What was clear was that potential transformations in adult/child relationships through technology use in the home were patterned along gender lines. Whereas expert fathers tended to act as 'computer technicians' in the home, to be called upon in all cases of disaster (with the exception of

difficulties in games play), mothers in these families tended to be the last port of call for advice and support.

KF *And is there anybody else you ask apart from your dad then?*
Who else would you ask for help

D *No one*

KF *Not your sister?*

D *No, she wouldn't have a clue*

Mrs C *Wouldn't you ask me?*

KF *Would you ask your mum? No? Why's that?*

D *She'd probably just bust it*

(C family)

KF *so what would you do if it stopped working?*

C *Just ask my dad, if he's not there I sort of leave it until dad comes home*

KF *what about your mum*

C *she doesn't know any more than me*

(W family)

KF *So you normally show her [Mum] how to use it then?*

B *Well yeah. When there's certain bits that she can't go, we give her a hand*

T *And dad's not there. Dad usually shows everyone else because he knows how to use it*

(M family)

Different hierarchies were being established in these representations of computer expertise, hierarchies which were not patterned along strict lines of opposition between parent/child, but which were inflected with gendered differentiation between adults, in which children as 'natural computer users' were closely articulated with (many) fathers' interest in technologies in opposition to (many) mothers' lack of interest (or, as some children put it) ability. The erosion of 'adult/child' boundaries, therefore, may see the emergence of new antagonisms, specifically, in this case, antagonisms positioned around the question of gender and technology

7.4 'Hegemonic' struggles in the home

Just as the media and political fields can be understood as sites of conflicting and competing interests, so too can we consider families not as homogeneous sites of

shared and coherent belief systems, but as sites for struggles to define meaning in order to generate consent for particular practices. Nowhere was this more evident than around the families' representations of the 'identity' or 'meaning' of the home computer.

While, as discussed above, the parents in the family actively produced the computer as an educational resource, a production the children were (more or less) compliant with when necessary, this articulation of the computer with education was rendered contingent rather than inevitable by its potential articulation with other uses, in particular, for computer games play. While schools, politicians, media companies and parents were attempting to 'fix' the meaning of the computer as an educational resource, arrayed in opposition to this were a combination of children, their friendship networks and games companies with their panoply of marketing materials attempting to 'fix' the meaning of the computer as a games machine⁶⁸.

In some cases, this opposition played itself out through battles over access to the computer: parents would give privileged access to the computer, for example, to those children who wanted to use it for homework; the children, knowing this, would claim educational objectives and then use the computer for games. In others, children found that pleading disadvantage at school through not having a computer at home could guarantee them a computer at home for games purposes.

What was also in evidence was a hegemonic move on the part of parents in which 'educational' goals were achieved not only through generating consent, but through concession. In the first instance this manifested itself in situations where parents would reward children with computer games as a 'carrot' for completing homework – an hour on homework and an hour on games, for example. A second strategy was to purchase 'edutainment' software which was 'like games...but educational!' Indeed, many parents were in sympathy with this idea as they had, themselves, recollections of education as a turgid process of learning from books and teachers:

⁶⁸ I am not suggesting, here, that all children liked playing games or that all parents opposed games play, but that this question of the computer as for children's 'work' or 'leisure' led to the development of a series of oppositions between competing views of what was 'natural' in terms of home computer use. Even when children or parents differed from this view, they were aware of its production.

Mrs C Well I think that they feel as though it's a game but they're learning all the time. It's sort of very knowledgeable.

Mr C It's right there, in your face, up front rather than digging a book out and trying to find the right page or anything like that. [...] but because they're not spending their time getting bored looking for an answer, because it's so quick for them they're able to do more of it, you know, and it's easier for them and so therefore there's more interest in it.

This concession, however, that 'learning' could be fun, that education could be incorporated into entertainment met with resistance from many of the older children (the primary aged children, however, were pretty compliant with this idea). In some cases, the concession was turned on its head, the articulation of games and learning was challenged, and the coercive move on the part of parents was rendered visible:

I had educational software for ages. When I was old enough to realise that there were better games out there I pestered my Mum to get those better games. And she would say 'You're not going to play on these games until you've had half an hour on this game'

At the same time, the attempt to colonise games into an articulation with education was, reciprocally, to open education up to the potential of its colonisation within the pleasures and discourses of games, a colonisation which changes the meaning of 'learning' to incorporate 'play'.

Q So you don't mind if they use it for games?

Mum They learn things, they learn.

Q When they're playing games.

Mum Yes.

(Mrs S)

Mum In some way the games teach them some thinking skills (Mrs W)

Indeed, the language of 'play' permeated all areas of children's use of the computer, blurring the boundaries between 'leisure' and 'work'. D's younger sister R, for example, described her favourite use of the computer as 'playing my First Encyclopaedia', and if we examine the interactions the children were involved with in their formal 'school' work, we hear them talking about 'playing' with fonts,

images, representations, simulations (see Facer et al, 2003, chapter 6). The home computer was actively being constructed as a 'playable machine' (Downes, 1998).

The attempt to colonise the home with the discourses of the school through the home computer is thus an exercise fraught with uncertainty as the means of this articulation is premised upon an unstable object, the home computer, which is as deeply articulated with practices of leisure and play as it is with practices of work and production. It foregrounds the risks of the hegemonic project, in that, through articulation, concepts are not just linked, but transformed in the process; through the articulation of home + computer + education + leisure, the idea of what education means is potentially transformed.

We can also consider these struggles in the context of struggles over the 'idea' of childhood – is childhood simply a time of preparation for 'the future'? Is the home simply a site for reproduction of future workers? As discussed earlier, parents were keen to produce childhood also as a time in which children *did* play (preferably outdoors in the open air), and children actively produced childhood as a time defined by present pleasures as much as future concerns. In this context, games also play a role – they are appropriated by children as a 'right' to enjoy pleasures in the present in the face of demands that they construct themselves in preparation for the future. The language the children use when they describe their games play is determinedly, for example, in the present tense; it is a language of immersion in the experience and in the activity, rather than a language of acquiring skills for future relevance; as such, it escapes the desire to articulate games within a discourse of acquisition of information age skills for the future (presented by some parents and many academic commentators) by reasserting the participation in the pleasures of the instant:

You're inside the cockpit, you're flying it. That's one. That's what you're flying. That's what the view from inside the cockpit's like. You've got the ship there you're attacking and then you've got...like that is brilliant.

It is arguably around games that children are claiming their independence from the longer-term project of 'information skills' and 'education'. The extent to which this is achievable is uncertain, but if it leads to a re-articulation of education with the pleasures of play, its results will at least be interesting to observe.

7.5 Summary

The 'domestic' field can be understood as a site of production of new ideas of childhood and technology, from which other sites can draw. If we consider, for example, some of the ways in which families were working together with technologies, they were producing new 'commonsense' ideas of childhood and adulthood which underpinned their relations with each other in the home. What is noticeable, however, is that while the concept of the 'learning team' is appropriated in media discourse, it is nowhere visible in the political representations of adult/child relations of the period. Similarly, when we look at the tone of address of most newspaper articles, these address adults *either* as incompetents, astonished by their children's computer facility *or* as experts in the ways of the world, wanting to manage their children's innocence. There are no examples of hybrid adulthood or childhood in the 'ideal' families constructed in the media discourses of this period. While the domestic field may act as a resource for the generation of news stories and the production of politically expedient analogies, then, it is not one which is able, on its own, to generate new hegemonic articulations of childhood with new elements of social life.

The potential emergence of a discourse linking games with learning, an articulation that could be considered an expedient concession on the part of parents as a means of rationalising children's games use, however, is taken up in the press. It could be considered that this met the needs and interests of a range of different social groups, from educators concerned to promote new 'situated learning' forms of education, commercial games companies keen to clean up the image of games, to journalists on the lookout for 'counter-intuitive' stories. The discourse of games and learning, moreover, is also a new articulation of social elements which can be easily incorporated into accounts of rapid technological and social change, and therefore into narratives of both educational and economic transformation, as in the following example from the newspapers of the period:

There is evidence also that a youth "misspent" in the company of computer games serves as useful grooming for a role in a high-technology economy. [...] According to Idit Harel, founder of an Internet website for children, "the kids who grew up immersed in computer games are now in their 20s and they are for

the most part a generation of bright, thoughtful and successful young people".
Varadarajan (1997)

The home is also a site of recontextualisation of media and political discourses, most notably, in our interviews, of discourses which produce the home, via the computer, as a site for the production of future workers for the information society. As discussed above, however, the recontextualisation of this discourse into the home opens it up to colonisation. The articulation in political discourse of education with information via technologies, potentially opens up the home as a site for learning which is in competition with, and could replace schooling; while the articulation in political, commercial and media discourse of computers with 'information age skills', serves to open up the potential for some parents to begin to challenge educational goals of the basics and computer literacy in schools, and to construct the home as a site for acquisition of the 'real' skills needed for the information age – those of the self-generative worker.

At the same time, while we witnessed (some) families operating with new 'ideas' of childhood, it was also clear that potential new antagonisms were emerging in the home, in which new relations of equivalence and difference were established along gender lines. Children's 'innate' abilities to use computers were articulated with paternal interest in the computer to construct mothers as 'non-technical'. The divide here was being constructed not around generational but gender lines, a divide that was rarely, if ever, mentioned in the news or political discourses of the period.

Finally, the above analysis highlights the ways in which ideas of the child computer user enters not only into different socio-economic and cultural contexts in families, but also into a much richer concept of childhood as lived in other sites and other places. Childhood, in these families, is both locally produced, and produced in articulation with a range of other practices – from scouting, to family visits to Pakistan, from walks with the dog, to animatronics and beauty products – childhood is far from 'defined' by technology. The image of the 'cyberkid', the production of a 'generation of screenagers' obscures both the diversity of children's day to day experiences and, perhaps more significantly, obscures the work that goes in to producing 'natural' computer users, work that relies on resources (of time,

finance and networks of support – whether from friends or parents). This process of obscuring the ‘work’ of developing computer expertise is one which discursively produces the ability to use computers as ‘innate’, a process which, consequently, may serve to position those (children or adults) unable to use computers for a variety of social and economic reasons, in a deficit position which they define as ‘natural’ rather than socially produced.

7.6 Epilogue: research as recontextualisation

Before moving on to the final discussion in the thesis and to addressing the research questions which I set myself, I want to briefly reflect on the extent to which these family interviews were themselves a site of recontextualisation of discourses of childhood and technology at this period. To do so, I need to return to the aims and methods of the study.

In the first instance, the project was conceived and conducted at the height of ‘cyberbole’ about the ‘impact’ of technology on childhood. Our goal was, in some senses then, to puncture these discourses and identify the differences that were emerging. To some extent our aim was to locate children’s technology use not within the discursive sphere, but to anchor it within the lived experiences of children’s lives, to focus on the sometimes messy reality of day to day experience. We were looking for continuities, we were looking for examples of socio-cultural and socio-economic context playing their role in shaping children’s computer use. And we found these.

The most serious shortfall in the research, in my view, however, is the extent to which we were also to some extent complicit with discourses of ‘change’. We were concerned, for example, to ensure that we worked with children who were ‘high-moderate’ users of computers in order to ‘future proof’ our research. As a result, there is a profound absence in our research, which is the absence of voices of parents and children who were very differently positioned in relation to the discourses of the information society, namely, those without the resources to purchase computers for the home. While we did conduct interviews with some of these children halfway through the project (see Facer and Furlong, 2001) and this to some extent overcame this silence, the voices of parents of these children, who

are the parents addressed by political and media discourse, are absent. In this extent, the research is complicit with the discourses of political and media fields, which also exclude these voices:

...there are large groups of people in which the media are not economically, and, therefore, editorially interested – crucially, the D and E 'social grades' which are categorised by the National Readership Survey as the unskilled working class and 'those at the lowest levels of subsistence' (McRobbie: 1995:568)

At the same time, when I look at how we have recontextualised this research in journal publications and presentations (not in our final book which acknowledged this absence), this gap in our research has often been overlooked. Arguably, this is because our research has become implicated in the increasing intensification of interest in children's learning in the home with computers, which means that the work we did with families in the home, and not the research into children without computers, is the research that has most commonly been appropriated and used in other contexts.

A second concern is that we were primarily interested *in* computers and interactions around these. Our findings, however, suggest that there is a raft of research that should be conducted into the ways in which family relationships around the computer are also prefigured and reproduced in other forms of family interactions – in what other circumstances, for example, might we find families working 'as teams', in what other sites are children's contestation of the home as a site for education played out? The research cannot address these issues because we were not looking for them, and in so doing, it reproduces the view of digital technologies as causal elements of these changes which is complicit with, to some extent, the accounts of computers as 'good for families' that is present in the reports emanating from commercial technology companies. We will only gain an understanding of the changing relationships between adults and children through a research lens that constructs these in relation to much wider areas of interest and concern, and we will only be able to understand the extent to which technologies are causal of any changes when we have a better picture of the complex practices of learning in the home more generally – whether about sewing, maths, car maintenance or animal husbandry. A study of how children and families learn

together and through 'pets' for example, might be just as revealing of these different family relationships.

A third concern is that, while our discussions of children's 'new models of learning' in the home have been appropriated and used in other contexts, our arguments concerning the social patterning of such new models have often been overlooked in the rush to justify changes in educational practices in schools. I have had, represented back to me, the argument that children and adults are working together around problems in the home as a call for a complete transformation of educational practice, a transformation that, from our account, may lead to significant potential forms of social disadvantage. The more nuanced argument we were attempting to present, which raises concerns about the implications of such changes for different households, has been incorporated within the overarching discourses of change that we had hoped to render problematic.

I hope, in the following discussion, to provide an analysis of the ways past some of these discursive problems, and to outline a potential alternative agenda for research and action which may render those of us still keen to promote children's activity and agency in computer use, less closely articulated with the 'cyberbolic' discourses of change and the interests of those who promote such discourses.

8 The colonisation of the 'digital child' in educational policy

8.1 Introduction

In Chapter 2 I outlined a wide range of ways in which digital technologies have been understood to be potentially 'transforming' childhood. In the following discussion, in the first instance, I want to focus on which of these changes were rendered visible in the political, media and domestic fields in the 1997-2001 period. Following on from this, I want to discuss why certain representations rather than others may have come to achieve the status of 'commonsense'. I then want to discuss the ways in which these ideas of childhood served to underpin certain transformations in educational policy. In so doing, I will address the three research questions identified at the beginning of the thesis, which were:

1. how were children's relationships with digital technologies represented in the public domain in the late 1990s ?
2. how were the discourses of childhood and technology in this period mobilised to create consent for the reconfiguration of material and social practices in homes and schools?
3. to what extent were these representations and reconfigurations of material and social practices implicated in the redrawing of the boundaries between adulthood and childhood at this period?

What is also clear, however, is that the research has raised a number of other issues for consideration which can be understood as political and ethical challenges for researchers in this field. I want, therefore, to go on to discuss the potential opportunities that I perceive for reconceptualising and challenging some of the hegemonic practices of this period. I will also conclude in the final chapter with a brief reflection on the research – its strengths, limitations, and the ways in which it will inform my own practice as a researcher.

8.2 Representing childhood in the information age

If we return to the ways in which empirical and theoretical research indicated that childhood might be transformed through interactions with digital technologies, and through new socio-technical formations outlined in Chapter 2, we saw that researchers proposed a range of possible transformations: the emergence of 'hybrid' and 'expert' identities for children, the development of new forms of 'worker' identity, the emergence of new roles for children in families as consumers, the development of new 'spatial practices' of childhood. And in all of these, there was a representation of 'childhood' as naturally well-placed to take advantage of the 'information age'.

While there is empirical evidence that many of these changes were happening in the period under consideration, what I am particularly interested in is how these multiple potential realities appeared in the public and familial discourses of the time as 'commonsense' ideas of childhood. These empirical and theoretical studies can be seen as outlining the contours of the potential 'generative effects' of the introduction of technologies into the realm of childhood; the question is which of these effects are stabilised in the ideas of childhood of the period and which come to act as organising principles for social practice?

Children, in this period, were clearly not represented in a singular fashion; we see, to some extent, all of these potential transformations represented in the discourses of policy makers, journalists and parents at this period. There is the child as 'natural computer user' in Blair's speeches, the rhetoric of journalists and children's accounts of their own computer use; there is the child moving outside the realms of childhood spaces in the narratives of online pornography; there is the 'hybrid' child in the vocabulary of 'screenagers' and 'the playstation generation'; there is the child as site of future investment in the policy pronouncements and the newspapers' consumer advice to parents; there is the 'expert' child in the stories of children's computer company successes; there is the child as advisor and teacher in the accounts of familial interactions around the computer; there is the child as consumer in the home in the demanding child of newspaper accounts. All of these representations are present at the period, and all, in some ways, problematise the

assumptions of the dominant framework – they weaken the relations previously established between childhood and a time and space separated from the adult world characterised by conditions of passivity and dependence.

What is perhaps more significant, therefore, is the question of what was missing from the representations of childhood. There are two key omissions from these discourses that have potentially significant implications for the ways in which 'childhood' is conceived, organised and realised in the context of the late 1990s 'information society'.

In the first instance, there is an absence of representations of the *processes* by which children come to be 'natural computer users'. The articulation of childhood and technology as symbolic of future economic success in political discourses, the articulation of childhood and technology as a means of ensuring and encouraging the purchase of home computers in media discourses, the articulation of childhood and technology as a means of encouraging children's educational work in the home in parental discourses; all these serve to create a set of equivalences between children and technologies which obscures the work and resources required for children to become 'natural' users of digital technologies.

The invisibility of children's learning in this discourse, and the consequent invisibility of the material, economic and cultural resources required to support this learning, renders children's ability to use computers 'natural', with profound implications for education policy. With no account of how children come to be seen as 'natural users' of computers, there can be no strategy put in place to support this acquisition of skills amongst those children without such 'natural ability'; with no account of the socio-economic patterning of the resources needed to support such learning, there is no strategy to engage with overcoming such socio-economic inequalities. Instead, the non-computer using child's 'failure' to use computers is equated with an 'innate' inability rather than one influenced by social structures and practices. Expertise in technology use is essentialised, the conditions by which this expertise is produced are obscured, and the demand, therefore, to challenge failure in this area is silenced. The hegemonic universalisation of a particular experience, in the discourses of newspapers and politicians, the

universalisation of middle-class access to and familiarity with computers to an idea of a 'natural computer user', is one which profoundly damages the potential establishment of strategies to support those children unable to easily access digital and cultural resources in the home.

The second profound absence in accounts of childhood and technology in this period, is an absence of any account of commonalities between adults and children in the changing contexts of the information society. The generational rhetoric that produces children as natural computer users serves to produce adults as struggling to keep up. The absence of socio-economic accounts of how expertise in digital technology use is achieved serves to produce generational differences in computer use as 'essential' rather than social. There are few accounts of children and adults sharing similar concerns or risks in this period, and reciprocally, few accounts of children and adults potentially working together to resolve or articulate concerns around socio-technical change. That there may in theory be more commonalities between different socio-economic groups that transcend generational divides, than between all children and all adults, is absent from accounts of childhood and technology in this period.

I will return to the question of these two absences later in the discussion, as I want to suggest that they have profound implications for how future relations between adults and children in respect of children's use of digital technologies are envisaged in educational agendas post 2001.

8.3 The de-articulation of childhood from the institutions of home and school

In Chapter 5 I discussed the ways in which New Labour education policy, specifically the proposals for the National Grid for Learning (NGFL), opened up the possibility for articulating the home with the school via the resources of the Internet. In Chapter 6 I discussed the ways in which the coverage of children's computer use shifted from 1997 to 2001 from a focus on children's interactions in homes and schools, to a focus on children's unsupervised occupation of the virtual spaces of the Internet, and children's 'unruly' uses of computers for games. In Chapter 7 I discussed the ways in which families, through their use of computers in

the home, were beginning to develop alternative 'models' of education for the information age from those promoted by government. I want to return now to these three themes emerging from the analysis and argue that, in the period 1997-2001, we began to witness a 'de-articulation' of childhood from the institutions of the home and the school, and instead, saw the emergence of an attempt to articulate a relationship between state and child mediated primarily through the resources offered by digital technologies.

In 1997 the NGFL policy was conceived in ways which attempted to more closely articulate the home with the school. The provision of resources which would allow the home to replicate the practices of the school through the Internet was a central plank of the proposals. This articulatory process, however, did not simply open up the home to colonisation by school practices, but also opened up the possibility of bringing the practices of the home into direct competition with the practices of schooling. The following statement from the Stevenson Report emphasises the ways in which, even at this early stage of the proposals, the home was constructed as a battleground for 'ownership' of children's interactions with digital technologies:

...the rising numbers of computers in the home [will] enable students to access the same set of educational resources, whether from school, home or a library and, thereby, be able to continue a project at home, rather than just to play computer games (Stevenson, 1997:27, my emphasis)

The potential for 'educational technologies' such as the computer, to be used for non-educational uses, such as playing computer games, constructs the home as a key site of hegemonic struggle, a site for struggle over the meanings and practices of computer use for children in the information age. This form of pleasurable engagement with digital technology was constructed in educational policy discourse primarily as the digital equivalent of 'fiddling while Rome is burning', or, as Blunkett put it at the time:

...the divide which sees some playing games while others are developing the skills that will equip them for the 21st Century' (quoted in McGavin, 1997).

The challenge, for policy makers, was to conceive of ways of articulating digital technologies in the home with educational practices. In these circumstances, it was essential to produce parents as willing and compliant accomplices in the production of the home as an educational setting. When we look at the newspaper coverage of the period, we can see that the home is constructed by journalists and by the research and reports of the commercial sector, as an educational setting. Advice is offered to parents on how to use the computer for educational purposes, on the software and hardware necessary to support this activity, and on the appropriate role of parents in helping children to use the computer for homework.

There were two profound obstacles to this attempt to articulate the home to the school via the use of technologies: parents' compliance in adopting 'appropriate' educational roles, and children's compliance in the interpretation of domestic use of technologies as educational resources.

Across New Labour policy in the late 1990s, we witness increased intervention by the State into the practices of parenting – whether it be through revisions in divorce law and the increasing emphasis on parental responsibilities to children (Williams, 2004), or the development of home-school contracts in which parents are required to sign up to a series of commitments to manage the home in ways which are conducive to their children's schooling. At the same time, the identity of the Prime Minister as 'first parent', the references to his own children and to children as the focus and goal of state investment, signals the emergence of new 'ideals' of the family, as a unit dedicated to preparation of children for participation in the workforce of the future. This increased attention and focus on parenting, however, is also evidence of an anxiety over the nature of such parenting: to enforce home-school contracts, to legally require parental commitment to children after divorce, is to acknowledge that these relationships are neither inevitable nor universal. As such, the extension of schooling into the home is necessarily conceived as unsecured to the extent that it relies on parents' adoption of appropriate educational roles.

What seems to emerge in the later 1990s, rather than an emphasis upon the changing role of parents and the home is an attempt to bypass the parent and the

uncertainties of the domestic environment, and instead to focus on the child-computer nexus as the focus for educational strategies. The focus for attention is no longer upon the child in the family, but upon the child alone in interaction with digital resources in any location. Consider, for example, Blunkett's proposal for individual education plans, which place the child's interaction with digital technologies at the heart of a network of 'educational resources to be drawn on wherever, and whenever a young person needs to':

The use of technology, with the new City Learning Centres at the hub, will make this possible in a new way. We intend to exploit that opportunity. This way will enable us to concentrate on the needs of the individual young person with an individual education plan, rather than fitting the individual into the system. This is a new approach which defines the education service as a resource to be drawn on wherever, and whenever, a young person needs to do so. The use of technology, the development of mentoring, the out-of-school programmes for both special needs and gifted children, and the concentration of mini EAZs, allow us to do so much more than has ever been done in the past. All this contributes to the development of the classroom and the school of the future. It is about transforming the nature of our education system which has changed so very little throughout this century. (Blunkett 1999)

This signals a distinctive shift in New Labour thinking about the organisation of education, one which fundamentally de-articulates the child from the school (and arguably the family) and constructs a new atomistic conception of childhood to underpin educational policy. Tom Bentley, senior researcher and later director of Demos, published 'The Classroom Without Walls' in 1998, which can be read with retrospect as a blueprint for much New Labour education policy from the late 1990s onwards. In this book, he argues for

...a shift in our thinking about the fundamental organisational unit of education, from the school, an institution where learning is organised, defined and contained, to the learner, an intelligent agent with the potential to learn from any and all of her encounters with the world around her. (Bentley, 1998:1)

The extension of educational practice into the home and into children's wider experiences in social life is conceived, in this account, not as being filtered through parental cultures and practices, but as being achieved primarily through a new relationship with the individual child. The child is de-articulated from both home and school by being conceived as the 'fundamental organisational unit of

education'. This 'de-articulation' forms the basis for policies which, post 2001, have been brought together under the catch-all phrase 'personalisation', to which I will return later.

This brings me to the second of the perceived obstacles to the process of extending education into the home: the agency of the child in the information age.

If we examine the newspaper coverage in this period, we see that representations of children's interactions with digital technologies for educational purposes form only a small part of a much bigger picture of 'childhood in the information age'. While the educational debates rage, there are also narratives of children as explorers of new identities as experts in this environment, there are narratives of children's computer games play, and there are narratives of children's occupation of the new virtual spaces of the Internet. The active child – whether celebrated (in the narratives of children as Internet entrepreneurs) or a source of anxiety (in the narratives of Internet paedophilia) – is presented as exploring digital technologies in ways which potentially challenge the ability of adults to manage and control their experiences. Into this mix is added the concept of the child as 'screenager' or 'cyberkid', naturally at home in and leading the way in the use of digital technologies. It is into this context that new educational agendas premised on the individual child operating with digital technologies must be introduced.

What seems to emerge, in this period, is the production of relations of competition between educational and leisured uses of computer technology, or more specifically, between adults' conceptions of appropriate uses of such technology and children's conceptions. Bentley, again, highlights this new relationship as a basis for reconceiving relations between educational institutions and the child:

Alongside these changes is the growth of distractions. Young people have a far wider range of distractions and alternative pursuits on offer than ever before. The growth of multi-and mass media, including computer games, pop music and the Internet, as well as the proliferation of retail and consumer goods, and leisure activities and facilities, means that young people choose between an increasingly wide range of alternatives. [...] Information is accessible in ways which older people are still struggling to get to grips with, while the young, more often than not, take to them like ducks to water. Educational institutions must compete with a dazzling array of alternative information, distractions and sources of motivation and example. [...] Whether we think that teachers ought,

in principle, to have to compete with such influences on their pupils' attention, they already do (Bentley, 1998: 80-81)

In the production of relations of competition between education and leisure a new conception of the child is produced, as both de-articulated from school and home, and as an expert *consumer* of the very digital technologies that are to be used to mediate new educational relationships. The child is articulated to the world of leisure, of consumption, of digital technologies; the child is produced as expert consumer of these artefacts and as expert navigator of the information landscape. The shift in collocations noted in Chapter 6 in newspaper articles, from the child as computer user in homes and schools, to the child as articulated primarily with the Internet and computer games, is evidence of the diffusion of such ideas of childhood into the public imagination.

What happens next (after 2001) in policy discourses, particularly in the context of the 'personalisation' agenda in public services, is an important elision of the expertise to make choices in digital leisure activities with the expertise to make choices in educational opportunities. What I want to suggest is that this shift towards a personalisation agenda in education serves as a strategy for overcoming and neutralising the obstacles of 'unreliable' parents and the 'active' child in extending the reach of the educational practices of the state into the leisured and everyday lives of children in the 'information age'.

Consider, for example, the following quotations from leading exponents of the 'personalisation' of education Will Hutton and Charles Leadbetter. In these texts they produce equivalences between consumer goods choices and educational choices. For these accounts to make sense, for the texts to have logical coherence, readers need to draw on a new commonsense understanding of children as active consumers of digital resources, and of such consumption practices as necessarily applying to educational choices:

Young people are far more avid and aware consumers than they used to be. This culture is bound to have an effect on how they view education. Many secondary school age children now have mobile phones for which they can get 24/7 telephone support, different price plans, equipment and service packages. They are used to a world in which they can search for, download and share digital music on the Internet. (Leadbetter, 2004:10)

On my son's Xbox we choose each member of the football teams we pit against each other. I inevitably lose. 'You can have Beckham, Lampard and Gerrard' goes his challenge. 'And I'll be Northern Ireland with 10 men'. This is personalisation a la mode, even if the result never changes. The Xbox generation is growing up in a world which it expects to shape to meet its particular needs. From the iPod playlist to the blogging sites, it's all about choice. [...] These phenomena – personalisation and plural, diversified production – are the unavoidable realities of modern business life [...] Which is why I find myself so taken aback by the passion of the Labour rebels' opposition to the education bill (Hutton, 2006)

Arguably, by the mid-2000s, we see the consolidation in these arguments of a new construction of childhood – one which is premised upon the child as active consumer, the child as active participant in digital cultures, the child as de-located from home and school institutions which originated in discourses of the mid 1990s. The concept of the 'child-consumer', specifically the child as expert consumer of digital technologies, has become a new ideological articulation, a new 'nodal point' around which it is possible to construct new approaches to education. The problematic and active child of the mid-1990s is now celebrated as the basis upon which new educational institutions will be built. The challenge for educators is constructed as one of ensuring that the 'offerings' of education are able to compete with the 'distractions' of the digital age, the role of the state, and of adults, is to ensure competition to enable consumers to select from the widest range of possible choices. As Bauman argues:

Among the conspicuous effects of 'deinstitutionalising' pressures are the 'privatisation' and the 'individualisation' of the teaching-learning settings and situations as well as a gradual yet relentless replacement of the orthodox teacher-student relationship with the supplier-client, or shopping-mall-shopper patter. This is the social setting in which today's educators find themselves bound to operate. Their responses and the effectiveness of the strategies deployed to promote them, are likely to remain a paramount concern of pedagogical science for a long time to come. (Bauman, 2005:316-317)

It is to the individual learner, in the choices they make, that responsibility is devolved for the implications of these choices. The challenge for learners is to develop strategies to navigate the educational 'offers' which are provided. Arguably, this incorporation of the active child as the underlying model of childhood for education is one which ties in closely with a changing concept of the sorts of citizens required for the 'information society':

it should be clear that childhood ambiguity in highly mediated societies can also be seen as necessary for the production of 'self-programming' (Castells, 1996) adult citizens who are capable of learning, changing and adapting throughout their lives: citizens fit, in other words, for the uncertainties of the new economy. In this sense, the ambiguity of childhood may even be seen as an operating principle of certain emergent technologically mediated educational practices. (Lee, 2000:71)

This de-location of childhood from the home and school, this production of childhood as a time of agency, choice and control over their educational experiences could arguably be heralded as a final acknowledgement of the agency of children, their need to have a voice in their educational experiences, and their abilities to make informed judgements about educational trajectories. Indeed, those of us who have studied children's learning outside school would argue that a greater degree of sensitivity to children's abilities to generate and manage their own learning process is long overdue. While those commentators who have long argued that educational institutions function primarily as a means of reproducing social inequalities have celebrated the increased emphasis on learning outside such formal institutions (see Illich, 1971; Hargreaves, 2004; Personalised Education Now, 2006).

I want to move on now to suggest, however, that an analysis of such changes which sees childhood as independent from adulthood, which understands children as atomised individuals rather than social actors in social contexts, is one which has potentially significant implications for the degree to which educational policies based upon the concept of the 'child consumer' will play a role in reproducing social inequalities.

8.4 Possible implications of the 'child-consumer'

What this vision of education offers is a potentially a fundamental shift in adult-child relations in educational settings. Agency of the child is enhanced to the ability to make choices from a range of options that are offered (both in and out of school), while the agency of adults is produced primarily through control of the choices that are made available. What is missing from this new idea of childhood, however, is any account of adulthood, of the role played by adults in shaping the ways children make choices or in taking responsibility for the choices made by

children. Instead, in the twin discourses of the personalisation agenda, the focus is on 'choice' and 'voice' – the ability for consumers of education to make choices, and to articulate what they would want those choices to be (Miliband, 2004). The concept of assistance in making such choices, of the provision of adequate information about the potential implications of such choices (in other words, the roles traditionally played by adults) are all but absent in these conceptions. Arguably, what this vision offers is a new relationship between adults and children, in which responsibility for the personal implications of the selection of one or other learning trajectories is devolved wholly to the child. The elision of children's ability to make consumer choices in the digital and leisured domain acts as the basis for the assumption that children are equally well-placed to make choices about their trajectories in the educational domain.

This vision is premised on the decontextualisation of childhood from the institutions and practices in which it emerges. It is premised on the concept of the 'natural computer user', and the absence of explanatory accounts of how expertise is built in gendered, socio-economic and cultural contexts. It is premised on an ideological articulation of childhood with expertise in the computer domain which profoundly obscures the extent to which this vision is premised on the universalisation of specific (usually middle class) familial practices and socio-economic resources to an image of 'all children'. If we return, for example, to Blair's vision of his child 'reading a computer as easily as I read a book' in the home, or more recently to Hutton's description of his interactions with his children around the Playstation, what we see is that specific familial circumstances are generalised and naturalised to create a conception of children's abilities to interact with, make choices about, and exploit digital technologies as 'innate' rather than produced in particular socio-economic circumstances. The function of adults in providing access to such resources, in providing social and cultural contexts for their use, is rendered invisible in the image of the 'natural child computer user'. The agency of the child is recognised, but the necessary correlate of agency, diversity, is obscured in a universalised image of 'all children' as embodying the same relationships with technology by virtue of biological age.

At a time when access to and use of digital technologies in the home remains profoundly patterned by socio-economic status⁶⁹, this universalisation of the 'digital child' can be understood as a means by which educational institutions are built around the assumptions and practices of one particular class, to which other classes must conform. That, Mr Hutton, is possibly why the Labour rebels were challenging the white paper.

This vision also obscures alternative conceptions of the relations between adults and children which were emerging in the 1997-2001 period. Absent from this vision is a concept of adults and children working together, instead, the adult world is conceived as provider of resources to tempt children to consume. Absent from this vision is the concept of 'hybrid' childhoods and adulthoods, in which agency, expertise and ability are seen as emerging at different times in different contexts – where on some occasions children act as leaders and teachers, and on others as novices and learners. Instead of a rigorous analysis of the role of adults in the digital age, this vision proposes a profound capitulation of adult responsibility. It is as if there were only two possibilities for adult-child relations – either the adult as sole shaper of children's experiences, or the child as consumer and controller of their destinies. This vision obscures the new ideas of childhood emerging in homes at this period. In the practices of the families we studied, for example, we saw a fluid interaction between different identities and roles. The child could act both as expert in one domain, and remain a novice in another; parents were neither naïve innocents nor sole holders of knowledge in late modernity. Instead, we witnessed families improvising new multiple relationships and interactions in which the privileges of 'standard adulthood', the right to authority and respect and knowledge, were earned rather than assumed in different areas of family life. This was not restricted solely to familial interactions of this period, instead, we saw some teachers clearly identifying a changing role in which they inhabited 'multiple identities' in the classroom:

I'm not so stupid as to think that there isn't someone in that room who knows a lot more about it than me. And that doesn't bother me, I don't care. If there's a child who's a real expert you learn from them, don't you? It doesn't

⁶⁹ The OFCOM (2005) Consumer Panel Report noted 56% of all households had internet connectivity but only 33% of low income families. At the same time, in the last quarter of 2005 75% of adults in Classes A/B used the internet compared with only 33% in Classes D/E.

matter.[...] There is a tendency to get caught up in the technical side of it that the geography goes, so I wouldn't let them have access in that way

This teacher was able to value the expertise the children had in one particular domain, but clearly distinguish between that and other forms of expertise and knowledge she could bring to the relationships. Where the children had technical knowledge, she was able to offer experience as a geographer of the knowledge domain and the connections that could be made in the different areas.

What we witness in these forms of exchange, both in the home and the school, is a relaxation in the concept of 'standard adulthood' as automatically the repository of knowledge and expertise, but also its powerful reformulation as a different set of skills and practices from those of children. The child in this context is not produced as consumer of education, but as a complex mixture of experience and inexperience. Importantly, standard adulthood is also produced as a mixture of these elements in this context. It is an approach which neither attempts to deny the emergence of children's expertise, nor simply to capitulate to it and to deny what it is that constitutes differences between adults and children in terms of world experience and experience of different knowledge domains. What we see in the home and the school in these examples, is the gentle grappling with an attempt not only to define 'childhood' in late modernity, but to define what the values and benefits are of 'adulthood', what it is that adults have to offer children in these more complex environments. In contrast, the political rhetoric of the 'information society', of providing skills for coping with 'tomorrow's world', of the 'personalisation' of learning, are all characterised by their profound failure to articulate a different view of what adulthood, and by implication education, should look like in these changing contexts.

One implication of this is that families, and children, are left to attempt to construct their own visions of 'education for the information age'. As discussed in the previous chapter, this produces different families in different relations to the skills and practices of the information society. Where some families were producing children's relationships in terms of the 'operation' of digital technologies, others were conceiving of children's interactions with the field of digital technology in ways similar to Castell's concept of the 'self-generative worker', the learner focusing

on thinking skills, creativity and problem solving. If economic success in the future is premised upon the acquisition of such skills, then the concept of the child-consumer, selecting from educational choices a range of options, is unlikely to overcome or challenge the conceptions of education that children bring into the school. Indeed, it is the invisibility of these skills and practices in the rhetoric of the information society, their invisibility in assessment practices and in the discourses of the media, which is likely to position certain children rather than others as best placed to achieve these goals. As Gee argues:

when the 'rules of the game' and the forms of language that society rewards are left implicit, to be discovered (inferred) by students as they are immersed in meaningful activities, we simply privilege children from families where these 'rules' and forms are already part of their social practices (Gee, 1996: 270)

This vision also potentially lays the groundwork for a radical reconstruction of educational institutions, in which the focus on the 'child-consumer' obscures the ways in which different families will make educational choices for their children. If the primary unit of education, for example, is conceived as the child-consumer using digital technologies to access information, knowledge and participate in learning communities, then the concept of the school is potentially eroded. In the first instance, we can begin to see in families the emergence of ideas of the home as a site of complementarity to schools, in which families attempt to manage risk and ensure their children's competitive advantage in education, through the provision of computers in the home. Perhaps more significantly, however, the emergence of alternative articulations of technology with education begin to emerge in this period. Hargreaves' construction in newspaper articles of the home not as a site for the provision of educational advantage, but as an alternative site and means of education (courtesy of digital technologies) begins potentially to destabilise the concept of state provided education. The rise in articles covering home-schooling, and the role of technology in offering a means of achieving this, similarly supports this concept of alternative sites of education. At the same time, when we look at some of the families I interviewed, they were beginning to construct the home not as a complementary site, but potentially as a site to replace formal education in the achievement of 'information age skills'.

The potential colonisation of the home by the practices of schooling envisaged in the Stevenson Report in 1997, could be seen as a site in which the discourses of state schooling were reciprocally colonised by the discourses of domestic consumption. As Fairclough argues:

Recontextualising the new discourse is both opening an organisation (and its individual members) up to a process of colonisation (and its individual effects) and, insofar as the new discourse is transformed, in locally specific ways by being worked into a distinctive relation with other (existing) discourses – a process of appropriation' (Fairclough, 2004:232)

Where I had previously analysed the relationship between discourses of education and discourses of leisure as one of competition, it is possible to conjecture in the context of a wider analysis of New Labour social policy, that this mixing of different discourses was one which served to lay the groundwork for a reconceptualisation of the provision of education, one which, premised on the atomised consumer, conceives of education simply as the process of selection of different educational experiences from a range of different potential educational 'service providers'. As Hall argues in relation to the NHS:

What 'delivery' presumes is that no one any longer cares who owns, runs, controls or profits from healthcare, providing the possessively individual consumer's personal need is satisfied. The reduction of the citizen to consumer and the 'privatisation of need' at the center of the market model are thus absolutely crucial but unspoken foundations to this strategy. [...] if they can be induced by relentless 'spin' to think of the NHS only in the individualist terms of 'I need to move faster up the waiting list', then they won't mind who produces it or whether health becomes a lucrative site of private sector investment. It's simply one more 'market' response to one more individual consumer's demand. (Hall, 2005:334)

8.5 Summary

What I have been attempting to argue in this discussion is not that the increasing visibility in public discourses of children as active and competent users of digital technologies led to a direct change in educational and social policy. Indeed, researchers such as Jenson (2004, 2006), Gee, Hull and Lankshear (2005), Prout (2005) and Williams (2004) would suggest that a shift in the relationship between the state and the child is one which is not confined to discussions of children's

relationships with digital technologies. Similarly, the idea of the active child has been prevalent in academic and 'progressive' educational discourses for many years without significant impact on the institutions of education (Fielding, 2003; Holt, 2004; Illich, 1971).

Instead, what I have attempted to outline is how this new idea of the active child as competent navigator of the new socio-technical formations of the information society comes to achieve the status of 'commonsense', and comes to be transformed into the image of the 'child-consumer' of education, precisely at the point at which the de-institutionalisation of education is being proposed as a response to the challenges of socio-technical and economic change. The significance of the active child computer user is only stabilised as a commonsense understanding of childhood at the point at which its recognition is politically expedient as a warrant for educational and institutional change. Arguably, this new 'idea' of childhood is promoted and sustained at this time as a hegemonic nodal point around which new neo-liberal state/child and adult/child relations can be forged.

This new idea of childhood, however, is one which, by obscuring differences in the ways in which agency and ability is built for and by children in social contexts, will come to create relations of difference between different groups of children, specifically those without the economic and cultural resources to 'compete' in this context. The discursive de-articulation of child from school and home, the erosion of the ideologies of the dominant framework in this context, far from being an emancipatory process which liberates children to fulfil their potential, potentially creates the conditions by which social inequalities can be ignored and children, as social actors, be constructed as responsible for and solely determinant of their educational (and social) success or failure.

8.6 An agenda for future research and action

What I want to move on to now, however, is a discussion of how it might be possible to respond to this move and to return to Laclau and Mouffe's conception of hegemonic struggle as something that can be initiated by social actors such as researchers, teachers and others rather than simply a description of the ways in

which power is achieved in society by dominant economic classes. In other words, I want to address Chouliaraki and Fairclough's question 'what can be done?'

Based on my analysis in this thesis, and my specific concerns around the potential for emancipatory action in the field of education and digital technologies, I want now to propose key sites for future action and research.

8.6.1 *De-articulating 'agency' from 'consumption'*

In the first instance, we need to attempt to de-articulate the equivalences created between children as consumers and children as social actors. It is in this area that the hegemonic articulation of child-centred educationalists and neo-liberal proponents is most problematic. As I discussed in Chapter 6, one of the difficulties of the oppositional and polarised debate in the media around children's use of digital technologies, is that it produces advocates of child-centred education in relations of equivalence with those who would advocate a free market approach to educational practices. The key means by which to challenge this equivalence is to identify the antagonisms which it attempts to obscure – central to these, I would suggest, are different conceptions of childhood agency and different conceptions of the relations to be produced between children through educational practice.

While I do not wish to speak on behalf of all those who would promote child-centred education⁷⁰, I will outline my own views of 'emancipatory' education here in order to produce a set of key distinctions between these views.

First, in conceptions of agency as consumption, children are produced in relations of competition with each other for educational resources; in contrast, I would

⁷⁰ Indeed, my conception of 'child-centred' education is profoundly different from some North American views of 'child-centred' education, such as those analysed by Jenson (see quotation on the next page (225)). For example, I would reference the work of Ivan Illich and Paulo Friere as central to conceptions of educational practice as 'child' or 'people' centred, while other British researchers would associated 'child-centred' with the Plowden reforms of education. And while I would draw on the theoretical insights offered by Papert in his conception of constructivist learning theories which position the child as 'active learner' as central to the educational endeavour, I would extend these theories by associating them with concepts drawn from practitioner-researchers such as the Reggio Emilia approach (in which the child is conceived as the subject of 'rights' rather than 'needs') in order to fully conceive of a 'child-centred' educational practice. What is interesting, indeed, is that the term 'child-centred' has itself become a sufficiently broad and ill-defined term as to mobilise the support of actors holding widely divergent different theoretical and political positions – as such, it needs to be treated with caution as itself a hegemonic articulation.

propose that emancipatory views of childhood agency would instead propose the potential for agency to be produced through collaborative relations between children.

Second, in conceptions of agency as consumption, there is no devolution of power and control over the choices on offer to the child save through the mechanisms of the market; in contrast, emancipatory views of childhood agency would instead propose agency as being produced through children acquiring the means of shaping and determining the choices on offer to them. Jenson, in her analysis of the production of children as the 'model citizens' of the state identifies the distinction between reference to an 'idea' of the child and reference to the actual needs and interests of diverse groups of children:

Children may be symbolic citizens in my analysis, but they are never full citizens in fact. They remain minors. Therefore, they can not, as real citizens must, employ the force of democratic politics to insist on social reform in the name of equality. A child-centred definition of equality is, then, also one which renders less visible the need for collective action by citizens mobilised to make claims and thereby use the state against all forms of unequal power. (Jenson, 2000:22)

Third, in conceptions of agency as consumption, responsibility for the success or failure of children to achieve their potential in educational settings is devolved to the individual child⁷¹; in contrast, emancipatory views of childhood agency would see adult and state responsibility as lying in the attempt to overcome the social and cultural differences which may determine children's ability to exploit the educational opportunities on offer. A central objective of this research agenda would be to identify the universalisation of particular middle class experiences to a conception of the 'universal digital child' as a hegemonic move, which attempts to obscure differences in the resources available to different families in different circumstances. A key strategy for making this visible is to argue for the need for an explanatory logic of difference in educational debate, rather than a presentational

⁷¹ Brown (1997) describes the devolution of responsibility for education success from the state to the family as a shift towards a 'Parentocracy'. I would argue, however, from this analysis, that this process is one which sees a shift not to the individual family in terms of responsibility for ensuring educational success, but, in its obscuring of differences between different families, a means of devolving responsibility to the individual child.

rhetoric which serves to create relations of equivalence between, for example, a Prime Minister and the diverse families which he should be serving.

These three distinctions, I would argue, need to be stated clearly and repeatedly in order to retain and revive the antagonisms between 'free market' and emancipatory approaches to education that have become intertwined in the discourses of the 'active child'.

8.6.2 *Re-articulating childhood and adulthood*

A second focus for research and action would be to attempt to re-articulate childhood and adulthood as reciprocal and intertwined experiences with, in many cases, shared concerns and interests. The discursive production of a generational divide, in the concept of the digital child, serves to produce relations of equivalence between all children, and relations of difference between all children and all adults. The concept of the generational divide also helps to obscure the role played by adults in the creation of the conditions for children's expertise and development in the information age. Arguably, this distinction is reinforced by certain research agendas in childhood studies which constitute childhood as a separate space of inquiry from adulthood.

Instead, I would argue that if we are to generate new conceptions of 'childhood' which account for children's agency *and* the social contexts within which this is built, we need to do so within an account of the changing nature, roles and capacities of *adulthood*. In order to understand how childhood is changing, therefore, we need to examine what it means to 'be adult' in the information society, what resources different adults bring to the construction of social agency for children. If we look at the newspaper and political discourses of this period, 'adulthood' is constructed primarily in relation to parenthood and teaching which are both produced in a deficit position to children's technical competence. What is needed is a fuller understanding, and a more specific articulation of the resources, skills and expertise of *adults* in an information society to balance the emphasis upon the technical skills and expertise of children in operating the tools of this society. In the educational sphere, this may require a refocusing upon teachers, parents and

other advisors in terms of the specific skills and resources they bring to bear in creating conditions for children to learn.

The challenge, moreover, is to create a new hegemonic bloc which articulates together the interests of children with adults. At the present time, the primary 'allies' of children's interests are the computer games and leisure sector who are the most vocal group articulating children's rights to play and leisure. What other alliances could be formed across the generations? What shared interests and concerns are there between different social groupings across generational divides?

If this is not to be a hegemonic project in which the interests of children are subsumed into those of adults, however, we need to find mechanisms by which young people are able to articulate and define their own agendas in this area. The UN Convention on the Rights of the Child is an interesting tool in this area – on the one hand, it enshrines the rights of children to be consulted in all matters impacting on them, on the other, it de-articulates children from wider areas of social debate and constructs them primarily as a specific 'minority interest' group of citizens to be 'consulted'. If we are to create an agenda for action which identifies the reciprocal co-construction of childhood and adulthood, and which conceives of both adults and children having shared areas of common concern, we need an alternative tool which views children as able to set agendas for debate in areas which are not traditionally seen as speaking specifically to children. In this area new social groupings such as the English Secondary Students Association, or the Youth Parliament begin to offer mechanisms for consultation and collaboration. These, however, are centralised structures which need to be embedded and distributed across communities and integrated into day to day activities to have significant impact.

8.6.3 *Interdisciplinarity*

In Section 8.6.2 I discussed the potential for the formulation of a new hegemonic bloc to challenge 'free market' approaches to education and the colonisation of discourses of children's agency by discourses of consumption. A key barrier to this, historically, has been the extent to which those of us who have advocated the potential for digital technologies to offer new approaches to education and new

relations between adults and children, have had to rely on the commercial technology sector for the products and tools we would encourage children to use. As a result, this has opened up advocates of emancipatory approaches to education through the use of digital technologies to the, sometimes justified, accusation of complicity with the goals of the commercial sector.

One challenge to this would be to ensure that the units of analysis in such research are widened from the interactions between the child and technology in educational and other settings, to include a reflexive critique of the extent to which these practices are implicated in wider economic structures. This would require collaboration across disciplines, linking together psychologists and sociologists in social inquiry.

Potentially more interesting at the present time, however, is the emergence of new approaches to technical development emerging in the Free, Libre and Open Source movements. These offer approaches to the development of educational and leisure resources which are both (in some cases) non commercial and which enable the close participation of users in the development of such tools. These approaches also extend, today, to new approaches to the circulation of information and knowledge such as Creative Commons. One opportunity for educators, therefore, is to work more closely with groups involved in this type of work, and thereby to create alliances across both educational and technology sectors in order to explore new economic models for the development of digital learning environments.

8.6.4 *Envisaging 21st Century Skills*

A final pressing agenda for research, policy and practice, is the need to create specific descriptions of what 'education for the information age' might actually look like. At the present time, while assessment systems retain their focus on the acquisition and regurgitation of facts, there is little explicit description of the features of 'self-generative workers' that might be essential in supporting all children to access and develop these skills. Where progressive education strategies are developing, where creative and collaborative approaches to learning are being introduced into education, too often these are introduced with no specific articulation of the attributes of children they are intended to encourage. If we

consider, for example, the Opening Minds programme from the RSA; while a list of competencies for the '21st Century' is generated, there is at present no means by which children can articulate how they may come to learn these or how they might come to improve or develop in these areas. The competencies are stated as bald prescriptions with little in the way of a route-map to support children to whom these do not come naturally, to progress towards them.

A second key reason for becoming more specific about 'education for the information age' is the need to challenge the equivalences created between neo-liberal and child-centred educational agendas. Without a clear articulation of the goals of social justice, collaborative human relations and social mobility, for example, of the emancipatory education movement, it is possible for the agendas of this group to be colonised by neo-liberal discourses which promote the atomisation and individualisation of educational practice.

9 Reflections

9.1 Contributions and limitations of the research

A key challenge in this research has been to engage with and reflect upon political and ideological debates in which I myself have played a role. Working with recent history is necessarily a process of working with one's own history, and my own history, in this area, is centrally involved with questions of childhood and digital technologies.

A central concern I have now, on completing the analysis, is whether an account of changes in child-adult relations in late modernity can be fully understood and interrogated only through an analysis of discourses of childhood and technology. The analysis, for example, does not engage with the changing context of policies relating more widely to children in a range of different sites – the emergence of discourses of child criminality in the 1990s for example, or the change in policies relating to children's occupation of public spaces. Arguably, an analysis of judicial and police discourses of childhood would have much to say about the changing views of childhood in this period. Instead, the research takes one small area of childhood at the end of the last century and focuses upon this as a way of examining issues which arguably are much wider and, potentially, more contradictory. In defence of this approach, I would argue that it was through education, and through the technologisation of education, that children were most visible in the political discourse of this period. This is not to say, however, that the research could not be enriched and expanded through a similar analysis of political and media discourses of childhood in other (non technological) sites.

At the same time, the focus for research on three different sites over a five year period has, at times, led to the need to simplify some of the tensions in the debates of the time. The heavier focus on media texts rather than family or political texts was an intentional means of compensating for this approach in that through these, I felt I would be able to more effectively convey the complexity of the 'hegemonic struggles' over childhood at this period. At times, however, I have wondered

whether the benefits of exploring ideas of childhood over three sites and such a long period of time were sufficient to outweigh a more detailed focus, for example, on the complexity of the discourses, and tensions, in the political field.

I have already mentioned in section 7.6 above, my concern that the empirical analysis of the family site focused only on those households with the resources to purchase and update computers. To fully understand the implications of the rhetoric of the digital child would necessitate a much more detailed picture of the discourses and experiences of those households without access to such resources. Similarly, I have already mentioned my concern with this research which bears similarities with my concern about this thesis, in that it interrogated 'ideas of childhood' in the domestic setting primarily in relation to interactions with digital technologies, rather than the wider practices, values and interests of children and parents. Again, extending the analysis in these areas would enrich and expand the accounts of ideas of childhood offered in this research and would serve to problematise the implicit equation of technology use with the changes in social practices we found in these families.

A fourth concern is that the structure of the thesis, organised as it is into analysis of distinct fields, and a linear structure that works through policy, media and family discourse, has led me to a more conventional account of the relationship between discourses of the political and domestic fields than I had intended. The circularity of 'ideas' of childhood, the reciprocal interaction between domestic, media and political settings, is almost impossible to articulate in a linear narrative. As such, the process of writing this thesis potentially overprivileges the determining role of political constructions of childhood, at the expense of analysis of the disruptive and originating discourses of domestic settings. Ideally, a hypertextual or three dimensional means of representing the inter-relations between discourses of these sites would be explored, one which more sensitively tracks the inter-relations of ideas of childhood between these sites.

I do believe, however, that there are some strengths to the research and some contributions which it makes to the study and practice of childhood and technology, and to childhood studies more generally. First, it provides a detailed

account of a specific and historically important conjuncture in educational policy, and examines the ways in which this policy is produced in interaction with a range of competing and conflicting discourses. In this way, I believe it identifies some of the barriers with which both politicians and researchers are faced in attempting to achieve equitable or radical educational change. I believe that it tracks the 'historic lines of tendential force' with which new ideas of childhood have to contend in attempting to reconfigure educational practice. As such, at least for myself, I have found it a useful exercise – what other researchers will make of it I leave to them to decide.

Second, I believe that the research contributes to childhood studies by both creating a more detailed analysis of the discursive production of childhood and technology than that in evidence in most mainstream childhood studies' accounts of childhood in late modernity. In particular, it problematises the assumption that digital technologies are inevitably transforming child-adult relations in emancipatory ways by locating such changes within the wider discourses of childhood and technology and educational practices of this period. At the same time, I believe that the research contributes to childhood studies by problematising a 'separatist' approach to the analysis of childhood, as it identifies the importance of an analysis which examines how childhood is produced in interaction with adults, and in interaction with socio-economic conditions which may lead to shared concerns between both children and adults. Finally, the research also demonstrates how the techniques of Critical Discourse Analysis can be applied in the field of childhood studies to interrogate and document the ways in which ideas of childhood change over time, and are recontextualised, colonised and appropriated in other discourses.

9.2 Standpoint of the researcher

The potential shift to the child-computer as the 'primary unit of education' seems today to be approaching practical realisation. The DFES are, according to informal comments from civil servants, considering a commitment to provide all children with a Personal Digital Assistant (PDA) in the next manifesto, and PDA projects with hundreds of children are being developed around the country. At the same

time, concepts of 'Personalisation' and the loosening of central control over the provision of education are embedded in the recent White Paper.

How has the research for this thesis informed my personal and professional response to these developments?

In the first instance, it has required me to reanalyse and rethink my working practices in relation to the commercial and political fields. As with many researchers in this area, I have at times been happy to appropriate the generalising discourses of the 'digital child' and of the 'information society' as a means of mobilising consent for transformations in educational practice which I believed supported the empowerment of young people. As with many others, I viewed the '21st century skills' agenda as a 'trojan mouse' by which to introduce different educational approaches. This analysis, however, has foregrounded the dangers of articulating my research agendas with those I believed were politically expedient. It has highlighted the how the antagonisms between my views and those of, for example, the commercial sector, have been neutralised and obscured in their recontextualisation in media discourse. It has emphasised the fact that hegemonic articulation involves not only the creation of contingent alliances, but the transformation of the different elements allied together in the process. I am not yet ready to be transformed completely into a free market advocate for educational reform...

As such, a central goal for my own research and practice will be to articulate as clearly and distinctively as possible, an alternative conception of childhood agency upon which we might build educational practices in the changing socio-technical formations of the information society. This conception of childhood agency needs to account both for the different contexts within which young people live, needs to account for the inter-relationship between different forms and context of adult and child expertise, and needs to account for the possibility of children themselves being supported to shape and determine the future educational agenda with adults.

In the light of this, I am currently engaged in a range of activities which attempt to contribute to this agenda. In the first instance, an action research project which is

exploring how relations of power might shift in educational practice from the teacher to a collaboration between teacher and child in the construction of educational objectives and research practices. In the second, I am exploring how we might begin to articulate an emancipatory concept of 'personalisation' and working with groups of young people, teachers and students in the process. Finally, although I am not yet sure how to go about this, I want to find ways of working with journalists and media commentators to create new spaces for public debate over education which move beyond the oppositional debates that characterised media coverage of the 1990s (and arguably beyond).

There is clearly a lot 'to be done' if transformations in adult-child relationships in the context of the information society are not to create and enhance social inequalities.

10 Appendices

10.1 Full list of political documents consulted

Those marked with an asterisk denote texts excluded from corpus analysis of New Labour texts.

Blair, T (2001a) Prime Minister Tony Blair's interview with Al-Jazeera 9 October 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001b) Prime Minister's statement to the House of Commons 8 October 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001c) Labour Party Conference, Leaders Speech, October 2001, <http://www.politicalspeeches.co.uk/index.php>, viewed 31-01-05

Blair, T (2001d) Prime Minister's statement on military action in Afghanistan 7 October 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001e) Transcript of briefing by the Prime Minister Tony Blair enroute to London from India 5 October 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001f) Joint press conference: Prime Minister Blair and President Putin 5 October 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001g) Transcript of joint press conference between PM Tony Blair and the President of Pakistan 5 October 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001h) Prime Minister's statement to Parliament (terror attacks in US) 4 October 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001i) Prime Minister's meeting with leaders of the Muslim communities in Britain 27 September 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001j) Prime Minister's statement at 10 Downing Street 25 September 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001k) Transcript of Prime Minister's door step interview in Brussels 24 September 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001l) Prime Minister's briefing to the press en route to New York 21 September 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001m) Transcript of door step interview: Prime Minister Tony Blair and President Chirac 20 September 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001n) Transcript of press conference: Prime Minister Tony Blair and Chancellor Schroeder 20 September 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001o) Prime Minister's interview with CNN 16 September 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001p) Prime Minister's statement to Parliament in response to terrorist attacks in the US 14 September 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001q) September 11 attacks: Prime Minister's statement including Question and Answer session 12 September 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001r) September 11 attacks: Prime Minister's statement 11 September 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001s) Press conference with Prime Minister Tony Blair and the President of Argentina 2 August 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001t) Prime Minister's speech in Sao Paulo, Brazil 30 August 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001u) Reform of Public Service 16 August 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001v) Transcript of doorstep given by the Prime Minister and President Mbeki of South Africa, in London 8 June 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001w) Prime Minister Tony Blair outside Number 10 after 2001 General Election 8 June 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001x) Statement on the Foot and Mouth disease outbreak 3 May 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001y) Savings and Assets for all 26 April 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001z) Improving your local environment 24 April 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001ab) PM's speech to the Christian Socialist Movement at Westminster Central Hall 29 March 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001bb) Stockholm European Council: Statement to the House of Commons 26 March 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001cb) Prime Minister's speech 'Empowering primary care and supporting GPs in the NHS' 19 March 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2001db) Prime Minister's speech at AMEC Yard 15 March 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

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Blair, T (2001hb) Speech by the Prime Minister at the Peel Institute 26 February 2001 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

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Blair, T (2000b) The Network's Annual General Meeting 28 November 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000c) Biotechnology: Investing in the future 17 November 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000d) PM's Mansion House Speech 13 November 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000e) The choice: investment in the health service 10 November 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000f) Stability or Boom or Bust: the economic choice 3 November 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000g) Prime Minister's Speech to CBI/Green Alliance 24 October 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

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Blair, T (2000l) Prime Minister's speech at the CBI Annual Dinner 17 May 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000m) PM's words at the Downing Street farming meeting 30 March 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000n) Health Statement 22 March 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000o) Speech by the Prime Minister to the Scottish Parliament 9 March 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000p) Speech at the Knowledge 2000 Conference 7 March 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000q) North East Businessman of the Year 3 March 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000r) Active Community Convention and Awards 2 March 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000s) The Government's Road Safety Strategy 1 March 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

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Blair, T (2000u) Committed to Europe, Reforming Europe - Ghent City Hall, Belgium 23 February 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000v) The Future of British Farming 3 February 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (2000w) Speech at the World Economic Forum at Davos, Switzerland 18 January 2000 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

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Blair, T (1999d) Statement: Tampere European Council 19 October 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999e) Britain in Europe 14 October 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999f) Outpatient Seminar 13 October 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999g) Speech on London First Global Network 22 September 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999h) Speech on E-Commerce 13 September 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999i) Speech on Outpatients Waiting Lists 7 September 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999j) Speech at the Aneurin Bevan Awards 5 July 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999k) Attracting more International Students 18 June 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999l) Speech to the National Association of Head Teachers 2 June 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999m) New Challenge for Europe 20 May 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999n) Speech to the Muslim Council of Britain 5 May 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999o) Speech to the Romanian Parliament 4 May 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999p) Speech to the International Convention on Sikhism - 300th Anniversary of the Founding of the Khalsa 2 May 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999q) Statement on the NATO summit in Washington 26 April 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999r) Doctrine of the International Community 23 April 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999s) Statement on the Berlin Council 29 March 1999
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Blair, T (1999t) Speech supporting the NSPCC Full Stop campaign 23 March 1999
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Blair, T (1999u) Maths 2000 Conference 16 March 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999v) NATO 50th Anniversary Conference - NATO, Europe, Our Future Security 8 March 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

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Blair, T (1999y) Charter Mark Awards - Modernising Public Services speech 26 January 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999z) Local Government Association Conference Millennium Bug Speech 25 January 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999ab) Millennium Commission Awards Fellowship 21 January 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999bb) Launch of consultation on the Teachers Green Paper 19 January 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1999cb) Education Action Zones 15 January 1999 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998a) Statement on Iraq 17 December 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998b) Speech on foreign affairs 15 December 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998c) China-Britain Business Council Conference 8 December 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998d) Civil Service conference 13 October 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998e) The International Economic Crisis: The Urgent Need for an International Response 7 October 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998f) Speech at the Opening of AVCO Trust 16 September 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998g) Prime Minister, President Clinton & President Santer: Press Conference 18 May 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998h) Speech at RUC Garnerville 6 May 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998i) The Second Asia-Europe Meeting 3 April 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998j) The Millenium Bug 30 March 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998k) The French National Assembly 24 March 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998l) Joint Statement by the Prime Minister and Taoiseach 26 February 1998 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1998m) Why the Dome is Good for Britain 24 February 1998
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<http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

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Blair, T (1998p) Speech at State Department - Washington 6 February 1998
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Blair, T (1998q) Arrival Ceremony at the White House 5 February 1998
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Blair, T (1998r) Breakfast for US Congressmen 5 February 1998
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Blair, T (1998s) Toast by the Prime Minister - Washington 5 February 1998
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Blair, T (1998t) Reception for the Multi-Party Talks 27 January 1998
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Blair, T (1998w) New Britain in the Modern World 9 January 1998
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Blair, T (1997a) Lonsdale Medical Centre 9 December 1997 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1997b) Europe Working for People 6 December 1997
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Blair, T (1997c) Anti-Racism in Sport Launch 2 December 1997
<http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1997d) Her Majesty the Queen and Prince Philip's Golden Wedding Anniversary 20 November 1997 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1997e) Speech on the Environment at Sedgefield 14 November 1997
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Blair, T (1997h) The Lord Mayor's Banquet 10 November 1997
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Blair, T (1997i) Opening Ceremony for Cairn Energy Offices 24 October 1997
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Blair, T (1997j) The Commonwealth Business Forum 22 October 1997
<http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1997k) Council of Europe Summit 10 October 1997 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1997l) Education Summit 4 September 1997 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1997m) The Death of Diana, Princess of Wales 31 August 1997
<http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1997n) Morpeth School, Tower Hamlets 28 August 1997
<http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1997o) UN General Assembly Special on the Environment & Sustainable Development 23 June 1997 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1997p) Press Conference in Denver 21 June 1997 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

Blair, T (1997q) The Prime Minister in Amsterdam 17 June 1997 <http://www.number-10.gov.uk/output/Page5.asp>, downloaded 31-01-05

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<http://www.politicalspeeches.co.uk/index.php>, viewed 31-01-05
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10.2 Process of searching for and refining texts selected for analysis within the 'newspaper' field

The search was conducted using the Lexis Nexis database which reproduces the text of all UK based newspapers (both national and local). Unfortunately, this database does not reproduce any visual images produced alongside news stories (figures, photographs, illustrations etc) but does provide the captions for any associated images. It also allows rapid identification of relevant newspaper articles using key word search terms and allowing a combination of different terms and dates to refine searches. Searches generate lists of full text rich text file articles which can then be saved and manipulated for more detailed analysis.

Newspapers selected

The search focused on all National Newspapers, however, at the time of the search Lexis Nexis were in a dispute with different newspaper owners which means that not all titles were, at the time, available to view. The final set of titles searched therefore offer a range of broadsheet and tabloid newspapers and a range of political opinions:

The Business	Daily Mail
Daily Star	Daily Telegraph
Express	Financial Times
Guardian	Independent
Independent on Sunday	Mail on Sunday
Mirror	News of the World
Observer	People
Sun	Sunday Express
Sunday Mirror	Sunday Telegraph
Sunday Times	Times

The database was searched for all articles referencing children +/- or digital technologies +/- or computers +/- or Internet in each of the years 1997-2001. A set of articles was produced for each year (by 2000, it was necessary to split the search into two searches for each year as including all terms produced more than 1000 articles). These articles were then read and 'non-relevant' or duplicated articles (where two searches had produced same article) were removed to produce the following breakdown of articles in the table below.

Note on 'non-relevant' articles: the database generates a file of all articles with the words children +/- or computers +/- or Internet. This generates a wide range of articles not all of which are specifically concerned with children. Those defined as not relevant, for example, included stock market reports, accounts of post 9/11 events, reviews of films (for example, Shrek reviews contain the words computer and child repeatedly but are about children's films using computer generated animation), another major theme in the 2001 articles was the Kilshaw 'Internet baby adoption' case, which was about the adoption of babies/children via the Internet but not specifically relevant to children's use of the Internet themselves.

The remaining articles take children, issues relating to children, articles addressed to parents, or children's use of technology as their central focus, whether in education, domestic life or the public sphere. It is on these, which are specifically concerned with the subjects of the thesis, that all subsequent analysis is conducted. However, the wider range of articles that were elicited in the first instance does provide an interesting 'incidental' insight into the ways in which children are implicated in a wide range of different assemblages today.

Search Name	Search Terms	Year	Number of Articles	Articles Duplicated	Articles Discounted as not relevant	Final Number of Articles Permitted
Children Computers Digital Technologies Internet 1997	Children (major mention) +/- or digital technologies +/- or Internet +/- or computer(s) in same paragraph	1997	525	22	169	334
Children Computers Digital Technologies Internet 2001	Children (major mention) +/- or digital technologies +/- or Internet in same paragraph AND Children (major mention) +/- or digital technologies +/- or computer(s) in same paragraph	2001	578 (computers) + 756 (Internet)	387	284	663

All the above articles (1997 & 2001) were subject to corpus analysis using Wordsmith Tools computer programme for keyword, concordance and collocation analysis. All the above articles were also read to produce the news events analysis summarised in Tables 6-3 and 6-4.

From these articles, a smaller number were selected for closer textual analysis. They were selected according to the following criteria:

1. they were part of a chain of texts linked with the texts analysed in the political field (i.e. relating to the NGFL proposals)
2. they were exemplary of particular themes identified in the corpus analysis (for example, relating to paedophilia or children's consumption)
3. they specifically referenced tensions between traditional and new ideas of childhood

10.3 List of newspaper articles subject to textual analysis

- Arthur, C (2001) 'The books interview: the teens who took over the net', Independent, 21.07.01
- Beattie, R (1997) The perils of giving in to the PC Pester Power, Mail on Sunday, 07.12.97
- Bright, M (1997) 'IT revolution in the classroom', Observer:4, 13.06.97
- Burne, J (1997) 'Homework tips for wired up families', Independent, 25.09.97
- Buxton, A (2001) 'School gates get closer to home', Daily Telegraph, 21.02.01
- Carr, J (2001) 'Why the Net is not child-safe', Times, 20.03.01
- Carvel, J et al (1997) 'King Bill's day out', Guardian Home Page:2, 08.10.97
- Clark, J (2001) 'Blair's £210m crusade to make computers key to learning', Daily Mail:6, 10.12.01
- Clark, J (2001) 'Why microchips are helping to make us brainer', Daily Mail, 23.04.01
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- Clinton, J (2001) 'Net Power: Generation Game', Sunday Express, 15.04.01
- Cohen, M (1997) 'Information Technology: Germans play game of catchup on the net', Guardian Education Page:5, 06.05.97
- Dixon, C (2001) 'Charles in battle to lure children off video games', Express, 11.07.01
- Duckworth, L (2001) 'Computer ban is new way to punish children', Independent, 26.03.01
- Feltz, V (2001) 'Why drip fed kids are not amused', Express, 03.07.01
- Frean, A (2001) 'Games boom as baby's playtime starts on PC', Times, 16.04.01
- Forsyth, J (2001) 'Protect our children campaign' Sunday Mirror, 11.11.01
- Garner, R (1997) 'Kids learn more from Sir than my computers, by Microsoft's Bill Gates', Mirror:6, 08.10.97
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- Goulde, C (2001) 'Power up: children don't want adults defining 'cool'', Sunday Express, 01.07.01
- Grant, R (1997) 'Schools book in for email future', Mail on Sunday, 18.05.97
- Hancock, D (1997) 'How to home in on the right computer for you', Mirror, 27.04.97
- Halpin, T and Burt, J (1997) 'Computers can't do the job of teachers, says Anne' Daily Mail, 08.10.97
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- Jackson, M. (1997) Would be model lets Blair down gently Times Educational Supplement 11.07.97
- Judd, J (1997a) 'The world of email enters the classroom', Independent:3, 20.03.97
- Judd, J (1997b) 'Bill Gates backs Blair's computer crusade', Independent:2 08.10.97
- Katwala, S (2001) 'Yesterday's men and tomorrow's children', Observer Review Pages, 12.08.01
- Kelly, M (2001) 'The Internet is not all bad', Mirror, 20.03.01
- Kerry, T (2001) 'School's Days are numbered', Daily Telegraph:13, 03.11.01
- Khalil, H (2001) 'Ease your children back into the learning curve' Express 04.09.01
- Macleod, D., (1997) 'All pupils to be given email addresses under Blair plan', Guardian Home Page:4, 20.03.97
- Marshall, B (1997) 'Summertime Views', Independent, 08.08.97

McCann, P (2001) 'Pupils should have Net L-Tests', Times, 30.01.01

McDonald, L (2001) 'Carol in call to protect children from net perverts', Express, 22.03.01

McGavin, H. (1997) *Blunkett Fears Two Tier Cyberspace*, Times Educational Supplement, 10.1.97

McVeigh, T (2001) 'Games stunt teen brains', Observer, 19.08.01

McVeigh, T (2001) 'It takes just four minutes to log onto paedophile web', Observer, 11.02.01

Millar, S (1997) 'Teens want friends and computers' Guardian Home Page, 02.06.97

Mitchell, A (2001) 'Go on son, let me win for once' Express, 07.07.01

Mitra, J (2001) 'Make it add up to fun', Express, 30.01.01

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10.4 Carol Vorderman's article in the Daily Mail, March 15, 2001

SECTION: Pg. 47;50 **LENGTH:** 1483 words

HEADLINE: I posed as 12 year old Tina looking for friends on the Internet. What I found will haunt me forever...

BYLINE: Carol Vorderman

BODY:

DID you know your child is just three 'clicks' of a computer mouse away from a paedophile? For almost a year, Carol Vorderman has been involved in a major undercover investigation into paedophiles on the Internet. The results will be shown this evening on Tonight With Trevor McDonald. Here is her shocking report

...

THE FIRST voice I hear is that of a paedophile 'grooming' a child for sex.

The man, who calls himself Jim, believes he is talking to a 12-year-old girl on the Internet. 'Do you know anything about oral sex?' he says in his kindly voice.

'Oral sex is when the mouth is used instead of . . . other things. You're so sweet.

You're very special to me. I love you, sweetheart.' This man is talking in an Internet chat room, but unknown to him he's not been talking to a child.

He's been talking to me.

For some weeks now, I have been working with technology journalist Richard Barry on an undercover television investigation into the predators who lurk anonymously and safely on the Internet.

And we can now prove that our children are just three clicks of the computer mouse away from a paedophile.

Five months ago, the Internet industry had its first big warning when Patrick Green, 33, from Buckinghamshire, was sentenced to five years in jail for having sex with a 13-year-old girl he had met in a chat room hosted by Yahoo! It was the first case of its kind in the UK. Since then, cases have been appearing in our courts with sickening regularity.

But the industry has done virtually nothing to protect our children.

After almost a year of investigation into this agonising subject of abuse, vulnerability, commercial greed and irresponsibility, I now believe the situation is critical.

Our film is shocking, and for that I make no apology. Using the alias Tina Bell, a 12-year-old girl living in London, we went to chat rooms hosted through Yahoo!

Instant Messenger, a free piece of software which has exploded onto the Internet in the past two years.

Within one minute of entering chatrooms filed under Romance, 'Tina' was contacted by a paedophile.

Within five minutes our screen was awash with messages from men who wanted to 'chat' with 'Tina'.

Some just typed their messages of love and sex; others switched to their computer microphones within minutes so that we could hear their voices.

Tina, we told them, didn't have a microphone and would have to type her messages to them.

There was Davey from Scotland. 'What are you wearing just now, darling?'

'Joggies (tracksuit trousers),' replied Tina.

'What would you do if I put my hand down your joggies?' asked Davey.

Then - 'I want you to sit on my knee and wrap your legs around my waist facing me.' Next there was a man from a town in the South-East who wanted to meet up with Tina. Another man from the North-East wanted the same.

A second Scotsman sent us photos of birthday cakes he had been making and sending to other children. But to return to Jim. He asked Tina: 'When you go in the shower sometimes do you touch yourself? Are you ticklish? If I touch the skin on your neck now that would be ticklish, and right above your breast, that's ticklish and ' On and on it went, getting more and more explicit and humiliating - and clever.

Yes, clever. Chat rooms allow paedophiles direct access to children in a way that has not been possible before.

And it speeds up the 'grooming' - and I wish to God that someone would think of a more realistic word to show the true horror of the way in which a paedophile lures the child into their confidence and prepares them for sex.

That process would usually take months in the outside world. But, due to the anonymity of the Internet, it is being condensed into weeks.

Children are being abused by strangers in the 'safety' of their own homes, and every parent needs to know how it happens.

The paedophile makes his first contact in a chat room. He will be friendly and caring.

He will tell your child that he/she is special, laugh at their jokes and ask innocent questions about their lives.

Then the sexualisation begins, the increasingly explicit questions and suggestions.

So-called Internet friendships grow far faster than in the outside world because many children spend hours, especially at night, on the web. They are naive and innocent: they are children and they believe what they are told.

After hours of this Internet contact, the paedophiles may then move to phone calls, usually on mobile phones. The most popular Christmas presents for children last year were mobile phones.

After just two weeks of softening up the child's natural wariness, the paedophile will try for a meeting.

TODAY, the Internet is a safe paradise for paedophiles. Nobody sees them, they don't have to confront any other adults, everything is kept as a secret between them and the children. They make sure of that.

When paedophiles use their microphones in chat rooms, their voices will come out of the child's computer speakers.

To protect themselves further, we discovered, they are now asking children to get headphones (about GBP 15) so that the paedophile's voice won't be overheard by anybody else.

There are some paedophiles who have suggested to the children that they get web cameras attached to the computers in their bedrooms so that they can watch them while encouraging them to touch themselves.

Horrendous? Shocking? Disgusting? Yes. And the industry which makes money from it is loath to do much about it.

I've spoken to many children who have been sexually abused by paedophiles they first met in an Internet chat room.

One young teenage girl told me how she believed she was safe because the man was just someone who typed onto a screen: he wasn't real.

He had coaxed her into sexual conversations and his 'special time' was when

he took her into his 'rose garden'.

This was the term he used for the time he would touch himself while telling her what he specifically wanted to do to her.

This man, Andrew Mandefield, became real to the girl just a matter of weeks after the first contact had been made.

He travelled 400 miles from his home in Hastings to have sex with her. He has been found guilty of sex offences with a minor and is awaiting sentence.

AND don't believe it's just girls who suffer. A charming, intelligent teenage boy in Cardiff I spoke to last week wandered into a gay site on the Internet. Within two minutes he had been contacted by a paedophile.

That man met up with the boy and abused him a matter of weeks later.

He was Anthony Gray, a married father, a lecturer in Oxford and a worker with youth groups. Gray has been found guilty of rape and now awaits sentencing.

In the first film I made about this subject, I recommended a website which gives advice to parents, www.chatdanger.com.

Following the programme, the site received hundreds of similar stories, 38 of which were immediately referred to the police and other authorities. These are not isolated cases: the list is long. All the children I have spoken to have told me that they wouldn't have confided in their parents because they were ashamed.

The discoveries of abuse have, in most cases, come about by chance.

And still the Internet industry comes up with its pathetic excuses for failing to act.

We were all horrified by the Wonderland case last month - and the paltry sentences handed out to the seven men involved in the exchange of tens of thousands of horrendous images of children for their sexual gratification.

BUT, as we discovered, certain Internet service providers continue to host sites where similar images are being traded every day. There seems to be so little will on the part of companies to tackle this problem.

It was only after threats in the media to name and shame the worst companies that one or two have pledged to take down sites called such things as 'babies for sex', 'paedophile's paradise' and so on.

Demon Internet has been the worst offender. It has now said it will remove these sites. I'm watching closely.

The best that the Internet Service Providers' Association can come up with, after months of meetings, is a few recommendations to their members (and these are only non-enforceable guidelines) that parents should be educated in these matters so that they can protect their children online.

Pathetic, isn't it? We need new laws for this new technology and more resources for police. But the most powerful way to stop it is for chat rooms to be monitored and closed down by the companies who make their money from them.

Until that happens, I will continue to campaign as hard as I know how for one reason. Your child is just three clicks away from Jim and men like him.

* CAROL VORDERMAN'S report will appear on 'Tonight With Trevor McDonald',
10.20pm on ITV.

10.5 ScreenPlay Project interview frameworks

ScreenPlay Interview 1:

PROGRAMME AND DRAFT QUESTIONS FOR ALL INTERVIEWS

Programme

Session

1. Explain Project. Tell family how it will affect them. Explain confidentiality/ethics. Give family a brief programme of events. Tell them about video in session 5. Map house. Ask some family questions.
2. a) Interview parents without child
b) Focus on child at computer
3. Focus on social life of child
Interview siblings. (Note: school interview happening at this time)
4. Screen based interview
5. Video
Final (brief) family interview

QUESTIONS

1. Family questions. Aim: the story of the computer in to the domestic
- Q. Can you describe to me your first memory/ies of the computer?
Q. Why did you buy it?
Q. Who bought it?
Q. What did you hope it would do?
Q. Did this computer do what you wanted it to do?
Q. Where did you put in in the house?
Q. Has it moved location?
Q. What happened to it?

ACCORDING TO ABOVE HISTORY, IF MORE COMPUTERS ACQUIRED

- Q. What happened next?
Q. Why did you buy the next computer
Q. How was that used?
Q. How did it differ from the first computer?
Q. Where did you put it in the house?
Q. Where is it now?
Q. Who owns it?
Q. Who uses it?

CURRENT

- Q. What computers do you have now?
Q. Where are they?
Q. Who does what on which computer?
Q. What equipment do you have? Printer (b/w or colour), scanner, modem?
Q. What do each of you use the computer for?
Q. What do each of you think of the computer?
2. PARENTS WITHOUT CHILD
- Q. Can you tell me something about yourself (to each parent or one parent)
Q. What do you do? (Work inside or outside home)
Q. What does your work involve?
Q. Do you use the computer at work?

- Q. What for?
- Q. What about at home? Do you use the computer at home?
- Q. Where do you use it at home and what for?
- Q. Do you help your child(ren) with the computer?

If they do help:

- Q. What do you do with them?
- Q. In what ways do you think you are able to help them?
- Q. What do your children do on the computer?
- Q. What do you think about that?
- Q. Do you have any rules in this house about computer use?
- Q. If so, what are they?

CHILD AT COMPUTER

- Q. Show me the computer you use most of the time
- Q. Why is it in this room?
- Q. Who uses it except you?
- Q. Do you have any problems using this computer?
- Q. Why?
- Q. When you use it, what do you do on it most often?
- Q. Can you turn it on and show me what you do?

ACCORDING TO WHAT THE CHILD DOES ON THE COMPUTER, THE FOLLOWING QUESTIONS MAY BE ASKED:

- Q. How do you get in to this programme?
- Q. What do you do on it?
- Q. What do you learn from it?
- Q. Is/was it fun? Why?
- Q. Is/was this work or play? Why?

THE QUESTIONS WILL DEPEND ON THE TYPE OF PROGRAMME(S) OR MATERIAL BEING ACCESSED

- Q. What difficulties do you have using the computer?
- Difficult
- Boring
- Access
- Siblings
- rules by Mum and/or Dad
- time

3. SOCIAL LIFE OF CHILD

- Q. Tell me something about yourself. Nothing to do with the computer for a minute.
- Q. What do you do outside school?
- Q. Do you belong to a group of any sort?
- Q. Tell me about it.
- Q. Do you go out with friends? What do you do?
- Q. Are there any rules about going out? What are they?
- Q. Do you travel much and if so how? Tell me about it.
- Q. Do you go into town much? What do you do?
- Q. What do you like doing most when you are not at home? Why? Describe it.
- Q. What about at home? What do you do at home?
- Q. Tell me about television. Do you watch it a lot?
- Q. Tell me about your favourite programmes? Why are they good?
- Q. What about videos. Do you watch them; with family; with friends.

- Q. Describe your video viewings
- Q. What about the telephone? Do you use it a lot? Who do you speak to?
- Q. What do you speak about?
- Q. Tell me about other things you do at home? Music? Reading (books/mags)?
- Q. Other things? Cooking; making; drawing; sport?
- Q. Do you have friends round?
- Q. What do you do? Where?
- Q. Are there any rules in this house about having friends round?
- Q. What are they?
- Q. Tell me about your brother (brothers) sister (sisters). Names, age?
- Q. Do you play/have a social life with above?
- Q. Do you argue with above? Why? What about?
- Q. Do you share the same interests? What are they?

ScreenPlay Visit 2

Interview with Child at Computer:

Overall view of children's activities with the computer

- view of software available to them and the software that they actually use.
- view of how information is organised on the computer by the child and how that space is shared with other members of the family (hard drive/disc organisation).
- explore how they save and retrieve information/files
- does anyone else manage this activity for them?

Children's preferred activities - initial introduction to.

- ask the children to tell you what they do most often when they switch computer on.
- if they use an information source, eg Internet/Encarta, explore how they make decisions about what to look at, and when they have enough information.

Other sources of information about the computer -

Look at manuals they say they have used, look at magazines they would use, ask re television programmes / friends etc. they would use to learn about computers. Get list from them of software on the machine and CD-Roms that can be loaded and get them to say who it belongs to, who uses it etc.

Documentary Evidence

Try to get print outs of 2 screens:

- 1) opening screen to see what software they have access to.
- 2) file manager to show how information is organised and saved.

Print outs from each activity would be useful for us to look at.

Is there any work they have completed that we can look at, it doesn't need to be print-based but could be saved on disk.

Parents Interview (without child)

We'd like to know something about yourself - what you do, how you feel about computers etc. We'll just ask some questions one by one

- Q. Could you give me a brief summary of what you have done since you left school and if that has involved computers at any point.
 - Q. What do you do now? (Work inside or outside home)
 - Q. How long have you been doing this job?
 - Q. Do you use a computer at work?
- If Yes:

FQ. What for?
 FQ. When did you start using it at work?
 Were you given training?
 Were you happy to use it when it was introduced or wary of it?
 FQ. Does using it at work mean you think differently about the computer at home?

In what ways

What about at home? Do you use the computer at home?
 If Yes:

Q. Where do you use it at home and what for?
 Q. Do you use the computer with your children?
 Q. Do you help your kids with the computer in any way?
 Q. What have you shown them how to do on the computer in the past?
 Q. Do your children help you to use the computer in any way?
 If yes:
 Q. What have your children shown you how to do on the computer in the past?
 Q. Is there any software in the house that just gets used by the children, what is it?

If No:

Have you ever used the computer at home?
 What for?

Why don't you use the computer at home now?

Q. It has been suggested that children should be allowed to take their computers into exams with them, do you think that's a good idea?
 Why/Why not?
 Q. How important do you think it will be for your kids to learn to use computers in order to get jobs in future?
 What sort of things do you think they will need to know?
 Q. How would you describe your child's use of the computer?
 (Eg addicted, not interested, use it as a tool etc)
 Q. What do your children do on the computer?
 What do you think about that?
 Q. Do your different children use it differently? Why do you think that is?
 Q. Is there anything your children have wanted to get (eg games. Software. Internet) that you don't think is a good idea for them?
 Q. Do you have any rules in this house about computer use?
 (Eg food and drink etc)
 Q. Do your children make any rules for you about using the computer?
 Q. What do you think is particularly good or bad about your children using the computer at home

ScreenPlay Visit 3

Interview with 'focus child' only
 Key Areas for Visit 3 Interview

Activities:

Map the child's structured and unstructured time outside school.

Explore the significance of both unstructured and structured activities.

Explore activities carried out with other people and in isolation.

Self-perception and positioning:

How do the children see themselves as social actors in relation to sport and sociability (academic status explored later – visit 4)

Childhood Space:

How do they use space – where are they not allowed and allowed to go and why?

Other Technologies:

Find out about children's use of other telecommunication and broadcast technologies

Questions

Activities

Ask the child to outline their activities during the week, for example on Mondays what do you do when you get home from school, then what etc....follow on for the whole week including weekend. (Use audio diary type pattern)

Ask the children to say why they choose to do certain things with their time, and ask them to compare what they enjoy about different activities

What do they do with their Mum/their Dad

What do they do on their own?

Is there anything they have to do with their time that they don't really want to? Eg, are they forced to go to piano lessons and so on/visit relatives etc

Ask the child if they think they are 'good' at sport, why/why not etc and where (they may be good outside school but not in it) - do they enjoy it, do they do it with friends

Ask the child if they spend a lot of time with friends, when and where (eg, in school/outside) and what they do with their friends and why

Childhood Space

Where do you spend most of your time outside school – at home/friends/outside/clubs/other?

Where are you not allowed to go on your own?

When are you not allowed outside on your own?

Where do you go with your friends – eg each others' houses, town, the street, youth club etc

Other Technology

Do they use the telephone at home?

where are the telephones in the house?

who do they phone/phones them?

when do they use the phone?

what is the phone used for?

are there any rules in the house around using the phone?

when do they want phone calls to be private?

Mobile Technologies

Do they have any technologies they can carry around with them – what are they? (eg Walkman/mobile phone/gameboy/pocket TV)

When do they take them with them and when don't they?

Television

where are the televisions?

what do they tend to watch ?

do they watch on their own/family/friends?

Do they have cable/satellite/digital – are these channels any different from 'broadcast' TV – why?

What sort of mood would they be in to:
make a phone call?
watch television?
use the computer for non-school stuff?

Interview with Sibling(s)

- Q. Tell me about your brother (sister)? Do you get on well?
- Q. What sort of things do you do together?
- Q. When or for what reasons do you fall out?
- Q. Do you play or do activities together. Tell me about it.
- Q. What about television. Do you watch TV together. What?
- Q. Does the TV ever cause problems? Why?
- Q. Explore other activities: music, telephone.
- Q. Do you go out together?
- Q. What do you do?
- Q. Tell me about the computer. Do you use the same computer?
- Q. Does that ever cause problems? How? Why?
- Q. Do you help your brother/sister with the computer?
- Q. Do they help you? How?
- Q. Are there things only you do on the computer your brother/sister can't do?
- Q. Tell me about them.

ScreenPlay Visit 4

Interview with focus child only

Aims: to ascertain the children's school experience of computers

History of School Computer Use

When did you first use a computer in school ?

What have you used computers for in school – which lessons, what software was it?

Get history of computer use in schools over the years for the kids.

Awareness of teacher attitudes

Could you tell us how teachers use computers with you in school?

What do you think about the different ways they use it? (good/bad – evaluate)

Who can they get help from in school in using computers – friends, teachers, teaching assistants?

School Context

How often do you use computers in school? Why is that?

What is the software like? Is it as good as they have at home?

How reliable is the computer equipment in school – have you ever had any problems with it?

The computer rooms – where are the rooms you use the computer in? How are they laid out (eg chairs in rows etc) how many printers are there? How many people are there to a computer? Are you allowed to talk to each other? Do you write on paper in the room, if so, where?

Can you use a computer outside lesson times – how do you go about organising this? (eg booking etc) Who tends to use the computer outside lessons most?

Are there any computer clubs – who goes to them?

Do they have accounts (eg passwords), are they allowed to save things onto the computer or onto disk?

Internet access – is there any Internet access, what do you do on the Internet in class? Outside class but in school?

Problems and Benefits to school use

What's good about using computers in school?

What's bad about using computers in school?

What do they do for school on the computer at home?

What have they learnt to do at school that they have then used at home?

Have you learnt anything at home, that you then use in school? What was it?

What do you do on the computer at home that is for school?

Do you always use the computer for school homework – why/why not?

What is the most helpful thing about having a computer at home for school?

10.6 Charcoal Sketches of 6 ScreenPlay Families

Family 1: The S Family

The S family lives in a four bedroom Victorian terraced house in a multi-cultural part of Cardiff, on a cut-through city street lined with cars tightly packed and punctuated by speed bumps and traffic calming bollards, just off a busy main road with a wide range of local shops selling fabrics, groceries and electrical items. The family comprises Mum, a housewife, Dad, a taxi driver, and five children aged 16, 14, 11, 9 and 7. There are four girls, and one boy (the third child), with the girls doubling up in shared rooms and the boy with a room of his own. Of Pakistani origin, the family describe themselves as 'strict Muslims', and English is the second language in the home.

Mrs S grew up in Glasgow. When her parents returned to Pakistan, taking her with them, she was only 15 and left school without gaining any formal qualifications. In Pakistan she married Mr S, who comes from a well regarded and well-off family. Shortly afterwards they returned to the UK, settling in Cardiff where Mr S has been driving taxis ever since and Mrs S has been looking after the family home and the children. They are a close knit family, although the father is only able to see his children for 1-2 hours a day and on Sundays due to the nature of his work. They spend Sundays together as a family, using the time, as Mrs S describes it, to 'be quiet', and prepare homework and clothes for the school week ahead

And on Sunday they always prefer to be at home, quiet day on a Sunday to finish off the homework for Monday, get the bags packed and the uniform ready and everything. They are quite good actually.

The children see friends mainly on Saturdays, with the older girls being taken into town by their mother to shop with friends, and being picked up again at the end of the day. The children are not allowed out in the evenings on their own as their parents prefer to keep a close eye on their children's activities, as Mrs S describes it:

We go out everywhere. Out, watch films, for a meal, McDonalds, anywhere. I take them, we go out together. But it must be a family thing, you see, it must be. So that they know what's right and what's wrong. I don't want them to go astray. Let them go on their own and then they go astray. No, no.

The family has one television set, with Sky channels, which is in the larger of the two family rooms downstairs. This is used by the whole family, although Mrs S is concerned that her children should not watch too much television. Television is

described by Mrs S as a waste of time, as too passive. This is tied in closely with her own personality which she describes as always wanting to be 'busy':

I'd rather spend my time doing something else, sewing or something. Something useful. I think time should be used usefully. I just hate them sitting around and wasting, I always think what are you wasting this time for? You could be doing this.

By 1998, the family had had a computer in the home for about 2 years. The first one they were given by another family member, but it was only considered suitable for games by the children as it had very limited other software applications – with only Wordpad, for example, as a word-processing tool. This computer was set up by the father, who is not familiar with computers and who installed the computer with the help of his son using the video instructions that came with it. The first computer was placed in the parents bedroom so that all the children could have access. After a year, however, the children began a concerted lobbying campaign to get a better computer that they could use for their schoolwork. This was led by the two older daughters who felt they were suffering in their schoolwork as a result of not having a good computer in the home. The computer the family decided to purchase was chosen on the basis of information the children had gained from friends at school, who discussed the 'latest' types of computers available, and also on the basis of the number of peripherals and CDs that came bundled with the machine.

N: *Because it was the new one out. Everyone's like 'Ah, it's really good' and everyone's getting it so we thought we should try this one as well*

A: *Because it's got free CDs and scanner and a printer. It's got a lot of stuff with it.*

KF: *So like everyone at school, was it them you were talking to about it?*

N: *Yeah, We went on holiday and when we came back everyone was like 'Oh have you heard of the new computer?' and loads of people were getting them. Loads of people were getting them*

It took the girls 'a few months' to persuade their parents of the need for a new computer. However, as Mrs S says, this was not a difficult battle for the children to win as their father is

'into everything that's modern, he likes to see what's this, what's that [...] especially if it's something good for the children. He doesn't mind buying or spending money.

At the same time, Mrs S could see another reason for having the computer at home – as well as supporting them in their studies, the computer is seen as another form of leisure activity to compensate for her lack of time, and for the restrictions on the children's access to other activities:

At last I though, why not? Why not? It's for the small ones as well, they use it as well. It's a good pastime, because I'm so busy I don't have time to take them out. It's only on special occasions like it's a good film or if the weather's good I take them to the park or something which... we don't have much social life you

see, because we're strict Muslims as well [...] So they'll have these things to keep them occupied which is good

This newer computer was purchased early in 1998 and was set up, again by the father and the son, this time in the front family room downstairs, on a computer table with one chair. It was placed in this room so that all the children could have access to it. The new computer is a multi-media Packard Bell, with bundled software including Encarta, WorldBook, Elle Beauty, Garden design packages and a number of 'edutainment' titles. There is no Internet access, although the son is lobbying for this, because Mrs S is concerned about the content that the children might access. The computer came with a scanner which, during the 18 months I visited them, never worked as the family were not able to figure out the fault themselves, had no access to other technical resources and the cost of the helpline was prohibitive.

Neither the Mr or Mrs S used the computer at all. It was considered primarily the 'children's machine' in the house. There were very few limits placed on the children's use of the computer, other than the fact that, with 5 children, it was difficult for them to access it individually for any sustained length of time. The parents placed no limit on the games or other activities on the computer, Mrs S saying that she rarely looked at what the son brought into the home (he was part of a network of friends who swapped games with each other). Mrs S viewed any use of the computer as positive, seeing games as an activity in which 'they learn things'. Computers were also seen by Mrs S as 'useful', an 'active' activity to be contrasted to television watching which she viewed as a waste of time and any use of the computer was seen as helping them understand technology. As she put it:

I think that's good, it's good. Plus as you know everything's computers nowadays. Office, computer, everything is... the file bit is gone now, everything is just done on the computer, your records, everything. So I think it's because the more they learn the more experience they have. Offices, everything is just computers

While the younger girls mainly used the computer for educational games, and the son mainly used it for computer games, the two older girls primarily viewed the computer as an educational tool, using it particularly for typing up coursework and looking up information. N, the 14 year old who we focused on in the family, used the computer for educational purposes in a very specific way. In the first instance, she used the computer as a research device, looking up very specific information which, once identified, she would print out. She would then write up her homework by hand and use the computer as a word processor to type up her homework. She never saved her work to the computer, and always printed out straight away – this was for two reasons: first, she viewed the computer mainly as a means of presenting her work better, not as a writing or editing tool; second, she was unaware of how to save and manage files on the computer. Instead, her brother was the only one in the family who would manage the documents saved on the computer, and he would regularly delete those he felt were taking up too much space. This was not a process any of the girls in the family were privy to.

There were clear differences in the 'digital cultures' in which the children in the family participated. While the two older girls read magazines such as Sugar and

Bliss, and spent their time, when allowed out, shopping and 'talking about boys', the boy in the family spent a lot of time playing computer games with friends, swapping games and reading computer magazines. To the girls, the computer was peripheral to their leisure activities, they associated it primarily with schoolwork and education and used it as such. They had very little interest in the computer as an entertainment device and preferred talking about other things with their friends. The son's interest in computer games, however, did lead to conflict in the family over access to the computer which led, ultimately, to the family purchasing a Playstation for the son, thus specialising the technologies in the home to either 'leisure' or 'educational' use, with the girls retaining primary claim on the computer for homework and the boy having his own games machine.

Where the son developed his computer skills through his peer group games culture, the older girls in the family were reliant on school for the acquisition of their basic computer skills. The school had explicitly developed an 'embedded' model of ICT skills training through the whole of Key Stage 3, during which time children would be taught as part of other subjects, the basics of word processing, spreadsheet use, DTP and data handling. These skills were being brought into the home and the older girls occasionally taught the younger ones how to use the computer for these purposes. Their interactions with their parents around the computer were limited, with the children's expertise being valued and acknowledged but neither parent feeling they 'had the time' to learn to use the computer. Instead, it seems as though the children's computer expertise was something that was valued and respected, and 'indulged' by the mother in particular. She said that the children often showed her 'what they could do'

Oh, this is this game, this is this game, this is how it works, if you answer wrong this happens. Look I've done it right [...] Look how good we are.

The 14 year old daughter was also using computers outside the domestic setting to explore potential relationships with the wider world. While at home, her use of the computer was specialised to educational purposes, in the school setting, she used the Internet to explore a range of different interests. In the first instance, for example, she and other Anglo Asian friends, used the Internet to look up information about clothes in Pakistan and to explore different practices there. This may have been tied in with her desire to visit Pakistan again, and was definitely linked with her pleasure in Pakistani customs and practices which included painting henna on her hands and having saris made for family weddings. At the same time, she and her friends were beginning to consider pushing the boundaries of their families' social practices, by beginning to explore and talk to strangers online, at the time of our interviews with N, however, she had not yet plucked up the courage to do so:

N *If you go on the chatlines, you know the one I said there was something dirty on the left hand side, so we really wanted to go on it, but then it was like...she was like 'go on, get on there, go on'.*

Friend *Yeah, there was this, you got this email address, there was this Indian guy who was doing them for like Asians or something and we were going to go on it but then she was like 'Oh, I'm too scared!'*

N *Really, we want any chatline to be honest [...] we just want to like talk to someone. Talk to someone that we haven't really... you know, you can make up lies I'm 21, tall, got a degree in this....'*

The financial circumstances of the family, combined with the appropriation of the computer as a means of maintaining strict cultural values and preventing access to the wider world until the children were adult, however, meant that the Internet and its potential for facilitating such illicit contacts were banned in the home environment.

Family 2: The J Family

The J family live in a small 2 bedroom flat over an old post office in a chocolate box village in rural Somerset. The family comprises J, the only son, aged 14 who lives with his mother Mrs J. J's Dad, Mr J, from whom his mother is separated, lives nearby and the family retain close links through regular visits and shared activities. J's older sister, now in her twenties, lives in another nearby village with her husband, who has a business reconditioning and building computers.

J's Mum trained as an agricultural secretary and worked as a farmer's secretary managing cattle sales, she then worked in a bakery and at the time of our visits, was changing jobs to become responsible for directing car deliveries from showrooms all around the country. J's dad was in the forces, as a technician in the Fleet Air Arm, and now works as a microelectronics technician for General Motors Trucks. Both parents are very involved in scouting activities, with J's dad acting as scout leader for the local troop, and J's mum working as secretary for the chairman of the local scouting division. Within the family, particularly on Mr J's side, there is a strong commitment to outdoors activities. J is a member of the local scout team and Mr J takes him climbing each weekend in winter and fishing in summer. Indeed, this commitment verges on a 'survivalist' mentality. As J says, his dad is a 'man of the bush', of whom J jokingly says 'the only time dad would ever use the computer would be to go on the Internet to find the best type of fungus that you could eat'. Indeed, Mr J describes himself as the 'county scout survival expert due to my military experience', and bemoans the fact that J uses the computer for art work instead of going 'round the woods and get some ochre and things like that and grind them all down'.

The only reason the family have a computer in the home is because of their sense that J would fall behind at school without one. Indeed, while Mr J is happy for their son to have a computer, he does express serious concerns about the role of technology in society, suggesting that there is too much over-reliance on technology, 'to me in my mind it's just taking all the thought process out of a human being', which could lead to serious issues of national security in future. His army training clearly informs much of his thinking as he says:

I was taught you can have all the technology in the world, but what it'll finally come down to is two men climbing out of a deep hole, sticking a knife on the end of the rifle and running towards the enemy.

The parents talk frequently of their concerns about the implications of the millennium bug and planned to spend millennium eve out of the country in

Belgium. They also expressed concerns that computers and technology in general were out of the control of the people who were supposed to be using them, citing numerous stories of computers making errors, turning themselves on and acting in ways that were unpredictable.

This is where you come not to trust them. You know, you just sort of use them for what you want them shut them off quick and hope they won't do anything

In this context, J seems something of an anomaly. While he (sometimes reluctantly) participates in the outdoor activities arranged for him by his Dad, he loves television with a passion, is fascinated by animatronics and enjoys art. He is a young and slightly sensitive teenager, who has only recently been allowed to spend time on his own at home. He rarely sees friends outside school, as they live in other villages which he can't get to on his own. He plays Warhammer – creating models and playing the game with his friends, and writes stories. He is a boy who never seems to finish anything – starting a range of different projects but not completing them, and is characterised by his enthusiasm and willingness to talk about things. He is, arguably, a dreamer who loves science fiction and describes himself as loving 'everything modern', as he says:

Before I die I want to be in the land where cars can fly.... You know when you see all these films where it's like... and they're like on motorbikes that can fly and stuff, like on Judge Dread and then there's this batman stuff and all this superman stuff and all this space age stuff.

The family has had a number of different computers over the last four years, starting with two different games consoles and then, 2 years before our first visit, in 1996, buying a cheap computer from a friend with money from J's grandfather. Mrs J wanted a computer in the home for James' education, but the family are financially insecure and were not able to buy the new computer J dreams of, with all the multimedia capacities he would want. Instead, this first computer was swapped with another one built by J's brother-in-law. This one was able to play some CDs, but had only limited functionality. Three key issues constrain the family's use of computers: first, financial limitations mean that they were only able to own second hand machines; second, no-one in the family was fully au fait with the technology, meaning that they had difficulties installing new resources and had to rely on the brother-in-law for help; third, the parents were not sure that they really wanted to invest in computer technology as they didn't want J to become reliant upon it to the exclusion of other ways of working. At a recent parents evening, however, Mrs J had seen work produced using the Internet and the computer by J's peers and had become very concerned that J wouldn't be keeping up at school without access to the information resources of the computer – either through CD ROMs or the Internet. By 1999, Mr J had been given a second-hand modem and the family had installed the Internet, albeit with strict limitations on the amount of time J could use it for (for financial reasons), and were keeping it in the sitting room so that Mrs J could keep an eye on what J was accessing.

The computer was used by J, in the first year of our visits, mainly as a production tool – to write up stories or homework, or to make greetings cards and posters. He also used the computer to create new stories based upon the characters in the computer games he played on his playstation. He tended to use the computer only

1-2 hours a week when we first visited, as there were no encyclopaedia CD-ROMs on the machine, and so it was of only limited use for education activities, and he preferred the games on his playstation. He often used it while his Mum was watching television, and would divide his attention between the computer and the TV screen.

He and his Mum had divided up the software on the computer to attempt to avoid conflicts and mistakes in use – so his Mum had 'WordPad' and J had 'Ami Pro' for writing. The family interactions around the computer were characterised by a number of tensions. J, confident and prepared to make mistakes, would work quickly and try things out to attempt to solve problems. Mrs J would work methodically on the software she was comfortable with, and ask J for assistance when stuck – these 'helpful' interventions from J however, often led to arguments as J would work quickly and not explain what he was doing to his mother, who would then become concerned that he was going to break the computer.

Mrs J It was the printer, yeah. And I wanted him to just hand on a minute so I could just look because I thought if we tried a different thing it would happen and he didn't want to know. So he just...

J I know I was going 'Mum, we need to get into a different file' and she goes 'Shut up'

Mrs J It was just trying to slow him down so that I could see what was happening as well. He just goes...and of course it all went again and I said 'Aaaah' and that was it

The distinction between Mrs J and J's interactions with the computer, is defined as an attitudinal distinction, rather than just being about training and experience. Mrs J is, she says, frightened of the computer, she doesn't trust it; whereas J is seen to be fearless:

Mrs J I'm frightened of it. I'm frightened I'm going to lose it all. I'm frightened I'm going to put something somewhere and not be able to find it. Not retrieve it. Because I haven't had any basic training in it I don't understand it really.[...] He's very good at going into the artist side of it and playing with all that and he's very good when he comes home mother screams 'Quick, quick, I've lost everything' and he's not frightened to go in and just play with it and bring it all back for me[...] So consequently it's lack of knowledge that frightens me. Whereas with him, even if he doesn't know he's not frightened to play around a bit and 9 times out of 10 it all comes back again, no problem.

The parents, however, seemed to take pride in J's facility in using the computer and working relationships were established around his skills. Mrs J, for example, would ask him to produce posters or try out different styles for her new mini-business running a saddlery; Mr J would ask J to make posters for the scouting activities he was involved with. The relationship was primarily one of the parents acting as 'commissioners' of J's work. When Mrs J was starting her new job managing deliveries for the car showrooms, a more formal financial arrangement was being put in place, in which J would use the Routemaster software, to plot out all the routes, and would be paid for this activity.

The parents both also expressed serious concerns about the use of computers in respect of children's health and abilities. They argued that children should be taught to critically analyse information, rather than just cutting and pasting – they viewed using the computer as an 'easy way out' of thinking. In contrast, J argued that his use of the computer at home was more challenging than the 'proper use' in school, because he felt it made him think harder:

At home, it's actually in my memory doing it. But at school you're actually getting told what to do so you don't register it you just sort of click where you're told to click [...] it's probably because in your brain you assume that you're going to get told to click there and click there again [whereas at home] when you're exploring the computer at home you just sort of register it as you go. Right, well I'm not allowed to click that otherwise that will go wrong [...] because I've clicked it before and it's done something wrong.

J's parents were also worried about over-reliance on the computer. Their watchword in all areas of life was, to some extent, 'self-reliance':

And that's why a lot of the time when he does homework it's not always done on the computer and I know a lot of the boys do it all on the computer. But I think it has to be something to help you, not something that you have to rely on

By the end of our visits in 2000, J had access to the Internet and was beginning to use the computer in different ways for school – accessing information primarily. But he was also beginning to participate in online activities on children's sites related to television programmes he enjoyed, he had also discovered the NASA website and particularly liked playing with the simulations and representations found there. Mr J's attitude towards his son's computer use had also undergone a slight transformation – whereas before he suffered computer use as a necessary modern evil, he had recently seen his son teach local scout leaders how to use the computer, and had seen him recognised by these people as an expert. Arguably, J's expertise had begun to pay dividends and be acknowledged within a domain which Mr J respected – this led to Mr J proudly showing off J's work to me on my final visit, and explaining how well respected J was in the scouting community for his computer work.

Family 3: The C Family

The C family live in a detached 3 bedroom 60s built family home in a housing estate in a dormitory town close to the M4 in South Wales. Mum, 37, an office administrator and Dad, 36, an aircraft engineer, live with their three children, D the oldest boy (11), R the middle girl (9) and W the youngest son (6). They are a close knit, young and lively family, very active and into sports, with Mum acting as secretary for the local Ten Su (karate club) and the whole family involved in karate at weekends. D, the oldest child, was diagnosed with ADHD and is now taking Retolin to 'calm him down', he is still a lively and talkative child who loves his computer games – sometimes too much, as his parents often have to ban his Playstation for weeks at a time – who is very protective of his younger siblings, to the point that he has ended up in fights with other children who have teased them. All three children are allowed out in summer to play in the cul de sac outside their

house with the other children in the street. D is allowed a little more flexibility and goes on bike rides with his friends round the town, and occasionally pushes his boundaries by going out into the nearby valleys, often returning home covered in mud and cut and bruised from having fallen off cycling too fast down a hill.

Mr C is known in the family as 'Mr Fixit', a name he fully lives up to with a number of different projects he undertakes around the house. On my first visit I was greeted at the door by Mr C wearing a dust mask, as he was doing some DIY in his daughters bedroom; but his projects extend beyond mere weekend sanding jobs. He has completely rewired the house, connecting all 6 televisions to the video and satellite feed in the living room and setting up a TV connection in the car. He has built their washing machine out of spare parts from two defunct machines, and throughout my visits to the family was involved in a massive project (with the collaboration of local skip companies) to fill in the huge ditch in the garden to quadruple its size. While much of Mr C's activities are driven by the desire to save money, 'necessity is the mother of invention' seemingly driving much of his projects, he is also someone intrinsically interested in how things work. For example, Mr C loves reading instruction booklets, he's known for sitting down and reading through them before using any new tool.

The C household is a highly mediated environment, alongside the 6 televisions in the house, the children's bedrooms function as an entertainment centre, with a huge number of digital and analogue media resources for the children to access:

Mr C They've now got the old analogue satellite system in their bedroom. So in that area in their bedroom where the computer is now, they've got the telly, they've got the computer, they've got a playstation, they've got a CD player, they've got a satellite system, radio cassette player... you know they're wired for sound up there. But try and keep them up there out the way....they're down here like...

The family all enjoy watching television – sometimes together (for Friends or Coronation Street), sometimes in different rooms. With three young and lively (not to mention loud) children in the household though, it seems as though the parents are attempting to create space for themselves by investing in resources for the children's play in their bedrooms. This was particularly important in winter when the children were not allowed out of the house during dark evenings.

The family bought their first computer for Christmas 1995 as a present for the whole family. Mr C wanted to know how they worked, Mrs C wanted to keep up with the children's computer use in school and wanted to be able to help them with homework, and the children wanted to play games. The family has a strong sense of wanting to keep up with the latest trends, and to prepare their children for the future:

KF So, why did you two buy the computer then? What was the thinking behind that?

Mr C Well, I mean, like you said before, because of the way life is going. They've introduced computers at work for me. They're getting more and more complicated. They're no longer just the menu driven

programmes you know, you have to start going in and using Windows, creating and saving files and things.

Mrs C I wanted to learn more really so I wouldn't get left behind when they asked questions. It's hard enough now with their homework, they're coming home and you're helping them anyway. But if they start going onto things like computers which we never had at school... [...] We guessed they would probably use it for a lot of games to start with, but my own thought was that they would use it for looking up information for homework, we'd be able to buy encyclopaedias and things like that... So we buy things for them to look up in books. But we know that you can get a lot of information on the computer as well.

The computer was assembled by Mr C and some friends 'after a few glasses' of wine' on Christmas Eve and placed as a surprise for the children under a big blanket in the family dining room alongside the new bikes they had bought for the family. This first computer was bought 'as soon as we could afford it', and was a low cost machine that caused some difficulties for Mr C over the years – he learned how to replace all components (including hard drives and mother boards), and taught himself basic and C programming to figure out how to fix it. He also approached learning how to use the computer as a project in himself and set himself one software programme a week to master. He was supported in these projects by his Dad, a computer engineer, and by the computer technicians at work, from whom he could easily ask advice or borrow resources such as books on programming.

After three and a half years, the computer was deemed too slow for the family's use, and was relegated to the boys' bedroom when they bought a new multimedia PC with Internet access, scanner and a wide range of other peripherals. Interestingly, this purchase was agreed in a matter of days and, instead of being seen as a Xmas present or 'event' purchase, was bought and installed as a matter of course, simply as a necessary upgrade to the family resources.

The new computer sits in the dining room alongside bookshelves with reference books for the children, and in sight of the television on top of the fridge in the kitchen. This room is used by the children in the daytime for computer games (before and after school), or for schoolwork, and by the parents in the evening for their own activities. The family clearly identify the computer as belonging to Dad, but the whole family uses it in different ways – with the two younger children often playing games together. They buy little new software and are usually reliant on presents from the children's grandparents, or on work colleagues who pass on old CD ROMs for the children. The children use the computer for software packages such as 'My first encyclopaedia' and 'Dinosaur Hunter', but also play games such as Jetpack together, and use animation software such as Batman and Robin Cartoon maker. Mr C encourages the children to try out new parts of the computer – getting them to make cards for grandparents using the graphics packages, or using the scanner to create funny pictures of the whole family. Mrs C was somewhat more reluctant to use the first computer:

Mrs C I use it completely different from [Mr C]. He's really gone into it and is learning things. I don't know whether it's just that I don't have time, but I just seem to be doing other things. I always seem to think

'Oh well, I've got more important things to be doing' and never make the time. But I said to him he's going to have to give me lessons. Half an hour a night, so I can get into it'

In the end, the family's investment in an Internet connection and Mrs C's change of job at work, meant that she came to use the computer a lot for email and Internet activities. The faster speed of the new computer meant that she also used it for her work as secretary of the Ten Su club. She also perceives the 'technology' to be becoming both more useful and also more pervasive in society in the late nineties:

Mrs C And the Internet now is taking over so fast that everywhere that you'd look everybody has got an email address [...] it's a lot more accessible now. Everyone can use it. Whereas I think 18 months ago, I don't think...it didn't seem to be... maybe it's because we didn't actually have it, but I felt as though, you know... the technology is moving a lot faster now

While the family has Internet access, however, they have password protected this access so that only Mr and Mrs C can use this. They have installed cyberpatrol 'filtering software' and only allow the children to use the Internet with parental supervision. However, none of the children reported significant interest in using the Internet, and preferred to use the computer (or Playstation) for games purposes. Indeed, despite the high level of support in using the computer in the home, the children tended to prefer television watching or playing outside and, at that point in their educational careers, had little reason to use the computer for school.

The parents, however, were happy with the use of the computer as a hybrid educational/entertainment device, indeed, the affordances of the computer seemed to coincide with their views on education as an enjoyable, active experience which links learning with fun and pleasure, in opposition to the sometimes 'grinding' processes of traditional book based learning.

The rapid, active, quickfire process of learning with computers was happily incorporated into the family's active, hands on approach to learning and projects more generally. In this household, however, while the children might have specific expertise in some computer games activities, it was their father they turned to for help and advice in using the computer. Their mother, in contrast, was seen as the last person they would talk to for computer support – although her role as advisor and emotional support remained strong. As D described, when he was frustrated, when he lost his friends, when he was having difficulties managing his temper, it was still his Mum he turned to:

I don't talk to anybody about anything really. Unless I talk to my Mum if its really really bothering me

At the time of my last visit, the family were reeling from Mrs C's diagnosis with breast cancer and were just beginning the long process of treatment. The prognosis was good, but the family were clearly committed to spending more time together as

a whole, rather than spending time separated into different rooms watching different television sets.

Family 4: The W Family

The W family, comprising Mr W, an engineer, Mrs W, an administrative and finance assistant for a local businessman, G, the oldest boy (16), C, the only girl (14) and N, the youngest boy (11), live in a 5 bedroom detached house in an affluent village in rural Somerset, within easy commuting distance of the M5 and surrounded by farmland. The house is one of 4 houses on a quiet cul de sac backing off a country lane and near to the centre of the village with its small shops, church and village hall. Mr W commutes to Bristol each day to work, while Mrs S works flexible hours, usually in the mornings, in the village. The three children all take the school bus to their schools, some distance away. The family is involved in a wide range of different activities – the children, for example, have tennis lessons, badminton club, hockey club, play football, and sometimes they attend church and youth clubs. The youngest boy has a stunt bike he rides in the fields, while the oldest is an avid football player. The two oldest children also work on a nearby farm for at least 8-10 hours a week, something which is encouraged by their parents who expect the children save up for spending money for any holidays. This is an affluent family, with a large garden and jacuzzi that they use as a family, having moved out of Bristol some 3-4 years earlier to ensure that the children had a better quality of life and more freedom to roam around outside.

While the boys make the most of this freedom – often out of the house for hours at a time in summer with friends, the only daughter has few friends in the village and prefers to spend her time in her bedroom, watching videos, playing on the old computer and playing with her doll collection. She is a confident and outgoing girl, but sensitive. At the time of the interviews she was being bullied in school, was worried about her SATs and revising avidly for these, and was concerned about the war in Kosovo and her sense that it might become World War Three. She was also concerned about alien abductions, and used little Indian Worry dolls to comfort her in her anxieties. At the same time, she wanted to be a lawyer, earn lots of money and take over the world. N, the youngest boy, was simply obsessed with his bike, with football and with computer games. G, the oldest, was a very keen footballer and spent a lot of time with friends playing computer games, buying magazines and, in the later years of my visits, using the Internet.

The family has a wide range of media devices, at least 7 televisions dotted throughout the house. The children had 6 walkmans, 2 'ghetto blasters' and 5 radios between them. They often spend Saturday nights 'eating pizza and watching TV' as a family. But family meals are strictly eaten in the dining room with no television, and the children are not allowed to eat and drink around the house.

The family had had a computer of one form or other in the home since before the children were born, starting with an early Spectrum, working through a basic 386 and a word processor, then a Commodore Amiga and, by the time of the first interviews in 1998, had had a multi-media, Internet connected Pentium computer for three years. The first computer was bought by Mr W, who was 'just interested in them and what they could do', as an engineer he is interested in how computers work and was also certain that they were 'the future' and therefore something he

should understand. He used the computer in the early days to write short programmes, such as hangman, for his nephews who were struggling at school. The family then bought further, more sophisticated computers, seemingly as part of a natural process of upgrading the technologies in the home, as Mrs W put it:

Yeah, we just progressed really. It was just like, once you've got one it's like a television, you have black and white and then you progress to a small colour and then you go bigger and bigger don't you?

There were also other reasons to upgrade the computer at home: Mrs W wanted to re-enter the workforce when her youngest son was 2 years old, and wanted a computer at home to retrain; both parents also saw computers as educational tools which the children could play educational games on. So the early computers in the home were placed in the children's play room, for the children to play spelling and maths games on during the day, and the parents to use for work or other interests in the evenings. By 1998, the family had set aside a 'study' for the children's use, where there was the PC and a computer that the boys could connect their two playstations to. Explaining this decision, the parents explained that the house was roughly divided into 'children's areas' and 'adult areas' – and the children could have their friends round through the back door next to the study without disturbing their parents.

By 1998, the family had had the Internet for about a year, and were grappling with the difficulties of early Internet Service Providers. Mr and Mrs W had some concerns about the Internet – primarily related to the cost, to the potential for tying up the phoneline, and to the material that the children might access. By 2000, however, the family had set up a separate phoneline, and were less concerned about cost. Only the oldest boy in the family was using the Internet and the parents had not installed any filtering software, saying that they preferred to trust him, and that in their experience, their son would have to 'be trying quite hard' to actually find material that concerned them. Mr W had obviously used the Internet for contacting other people, a subject of some debate in the family, as Mrs W puts it, he was using it 'to chat up young ladies in Scotland'. Both parents viewed the computer as a powerful educational tool, and Mr W in particular, who doesn't like reading books, thought that the information resources available on the Internet and on encyclopaedias were a way of transforming children's educational experiences:

It's an enjoyable way of finding things out without having to sit and read a book

Indeed, there were no books or other resources available in the study that the children worked in; in fact, there were very few books in the house as a whole. Looking at what the children were doing on the computer, however, the youngest son rarely used it as, at primary school, he had no real need to use the computer for homework. His only use of the PC was to play 'Worms', and he preferred using his Playstation, arguing that it had better graphics. G, the oldest boy, used the PC to make 'fair copies' of essays, usually co-opting his mother into helping him by typing up work that he dictated to her (a service she also provided to her daughter). He too, preferred using the playstation for games, not only because of its graphics capabilities, but because his friends all had playstations and they were able to swap cheats and tips for the playstation that would allow him to play more easily. G was

an avid reader of the playstation and computer magazines which were in circulation amongst his peer group. C, however, used the PC a lot – for looking up information, for designing project covers, for writing reports. She was seen as the main user of the PC, which also tied in with the perception of C as the most diligent pupil amongst the three children. She was interested in the Internet as a way of talking to people she didn't know, perhaps in response to her isolation in the village, but by the time of the last interview had only used it a few times as she found it difficult and time consuming to log on and didn't want to ask her father for help.

Access to the technology in the home was managed either by prioritising schoolwork, or by managing the amount of time each child spent on the machine. However, these tensions were avoided by the purchase of 2 playstations for the boys, which removed some of the competition for the computer. The family reviewed the games the boys wanted to buy, sometimes vetoing their selections if there were values presented in the games of which they didn't approve, for example, Grand Theft Auto was banned because of its emphasis on drugs and prostitution.

Mr W was the main source of information about how to use the computer in the house and was responsible for installing all the software and managing all the files, as Mrs W says, he liked organising the computer 'so that no one can find it when they want it'. He acted as the technician in the family, solving any technical problems that emerged and rebuilding the machine from scratch where necessary. This was a role he also fulfilled for the extended family and they would often take trips to family in Devon in order to quickly sort out their computer problems. Mr and Mrs W used the computer together, when Mr W would help his wife with technical issues relating to her work. He would also use the computer with his sons – to install or play games, and with his daughter, to explore the encyclopaedias and, on one occasion, to try out new software that would allow them to make films. Mrs W had begun to take a real interest in the Internet by 2000, as she saw its potential in allowing her to keep in touch with friends in Australia.

For this family, then, computer technology was simply an everyday domestic artefact. The children were able to select from a wide range of resources for their leisure or educational needs. The parents were able to use the computer for both work and leisure, and to support their children. In comparison with the television, and with outdoor activities, however, the PC was only rarely used – instead, it was seen as a productive work tool for educational purposes. Games, play, leisure were primarily associated with life elsewhere – through the television set, in the fields of the surrounding town, in the huge range of activities the children were involved with, or in the playstation games console.

Family 5: The M Family

The M family lives in a terraced 60's build 3 bedroom ex-council house on an estate in a dormitory town in South Wales. The family comprises Mrs M and daughter G (17), both assembly line workers working shifts at the local Sony factory producing video shields for televisions, and daughter K (14), attending the local secondary school. The house is on a quiet street in walking distance from the town's shops, and about 10 minutes from the M4 motorway. The town itself is

located near the Welsh Valleys and, despite the major road network in the area, it is easy for the youngest girl to get out to the countryside at weekends and on summer evenings. Both daughters are expected to help with housework, with K having duties including washing up, vacuuming and dusting. The oldest daughter tends to spend most of her time outside work with friends, and was just attempting to pass her driving test when we first met. The younger daughter spends most of her time with friends, but also goes with her Mum to visit her auntie once a week in a nearby town, and babysits for her 5 year old cousin.

Mrs M and K are both very active, interested in sports and enjoying keeping busy. K plays netball, basketball and does trampolining and athletics for school, she also plays squash with her Mum in the local sports centre. G, however, had little interest in these activities and was only recently getting over a broken ankle that had seen her laid up for a few weeks. The family enjoy watching television – with Mrs M and K preferring wildlife programmes, but the whole family watching soaps together each week. They had previously had Sky, but Mrs M cancelled their subscription because she felt that K spent too much time watching cartoons at weekends.

They had had a computer in the home since K was 5, this first computer being a Commodore 64 which was mainly used by K for games. None of the rest of the family had any interest in, or made any use of the computer. 3 years before my first visit, K's dad had died from cancer, and it was in response to this that Mrs M decided to buy the new computer that K had been asking for. The computer was a present for K's birthday and she was allowed to choose it herself. Her Mum just paid for it rather than playing any role in the selection and viewed it as a present for K in the light of her Dad's death. As Mrs M explains:

But she'd asked for the computer for about 3 years previous to when he died. 'Oh yeah, K, yeah, K' because it's like my own keyboard, played with it for a week, chucked it in the cupboard, my own guitar, played for a week, chucked it in the cupboard. And I thought I'm not spending all that money to have it wasted. And then when her father died she said 'Mum, I still want a computer', so right, do it for her. Best thing I ever did.

The computer is used only by K, and is seen in such a positive light by Mrs M for a number of reasons. The first is that it seemed to help both K and her mother understand more about the death of her father.

And I think she'd had it, must have been about a week, and she was busy finding out and, you know, I wouldn't see her for hours on end. And I sat in the bath and I thought, right I'm going to shut the door and stay in there for an hour, you know, you like just chill out in it. When I'd come out I had 8 pages on the type of cancer that my husband died of because she'd found everything on this particular cancer on the computer. So she'd printed it all out for me 'Mam, go on have a read of that'. And from that day on I haven't looked back. She's really into it like.

Mrs M said that K never mentioned her father's name after he died and that she was a child who preferred to keep her feelings to herself. In this context, the computer seems to have played an important role in helping K understand what happened with her father's illness. It also helped Mrs M to understand, as she said

that many times she had not understood what the doctor's were saying as they couldn't speak in layman's terms.

At the same time, Mrs M also sees K as different from herself and her older daughter G. Whereas they both struggled at school, with G dropping out early, K is seen as having more of a chance to succeed, and the computer is seen as playing an important role in encouraging K to keep up with her schooling, and in supporting her education.

Because I myself never had no interest in school whatsoever. All I wanted was to get out. And G, I'm afraid, followed me. But K has got more interest, she's more learning. She wants to do it. So I didn't want to hold her back, and end up in a factory like me and you, love. She's got more going, more brains, she's inquisitive, she wants to know all the time. So that's why I bought it for her.

Mrs M would also like to get the Internet for K, but the phone costs were prohibitive and so it wasn't possible for them to have it at home. K desperately wanted it, but understood the financial constraints and did not complain to her mother. K's use of the computer was constructed as almost wholly educational or productive. Her mother refused to buy any computer games for her, and K only had one, Monopoly, that she'd received as a present for Christmas from another family member. She mainly used the computer for schoolwork, primarily for putting projects together and looking up information. She also played on the graphics packages, which allowed her to make cards and calendars and to manipulate different graphics. She's also been given a medical encyclopaedia that the whole family had an interest in.

K never used her computer with her Mum or sister who both thought of the computer as 'K's machine'. Occasionally they would ask her to make something for them – such as a card or calendar – but other than this there was no interaction between them around the computer. K also used the graphics packages with friends who would visit in winter, and played the Monopoly game with them. She did, however, emphasise that she was not really 'addicted' to the computer, instead she preferred to be outdoors 'running around' and involved in sport. Indeed, K spent many evenings out with friends around the town or in the local countryside. In particular, large groups of them would visit a local castle, play football in a big crowd and frighten each other telling ghost stories. Or, they would go to the school playing field and just 'hang out' there in the evenings until the local policemen asked them to move on. The computer, much wanted by K, had become an everyday part of her school life and a useful distraction in the home; given the choice, however, K preferred to spend her time being physically active and at our last interview, she said that she was considering becoming a PT instructor in the army, as a way of seeing the world. As a result, she dropped GCSE IT to make way for extra PE modules.

The computer in this family was a 'way out' of life in the factory, but its function was primarily symbolic. It marked K out as having a different relationship with the future – needing to learn to use technologies because she had a different relationship with schooling and with future workplaces. It also marked K out as in need of support and encouragement for schooling. She, her mother implied, was worth investing in and encouraging; if this did not manifest itself in a passionate

interest in computers, it didn't matter, as long as K was able to make the most of herself and escape the factory:

I just sit and watch K and I just haven't got a clue. I wouldn't even know how to switch it on. So I think they should have the chance to use a computer [...] So whether it's schooling or job or... I mean I'd prefer to see K using a computer for a job than stuck in a dead end job like I am. You know, I'd prefer her to do something better. [...] G's had a bit of bad luck really [...] she wouldn't go to school, she left [...] I don't think she's that interested or bothered. She's like me, she's got a job, she's got a bit of money, she'll wait for a fella to come along and look after her [laughter]. [But] K, I mean everybody praises their own child, like, but to me K has got a good head on her. You know, and I prefer to see her use it than waste it.

Family 6: The G Family

The G family live in a three bedroom country cottage on a quiet lane in a small hamlet in Somerset. The house overlooks the road and fields running down to a river and is miles from any shop or amenities. It is an archetypal English country cottage with flowers around the door and a garden with swings for the children to play in. The family comprises Mrs G, a secondary languages teacher, Mr G, a strategic consultant, B and T, ten year old identical male twins, L, their little 6 year old sister, a large golden labrador and an old tabby cat. The house was, in the two years I visited them, often in a state of some disarray as various rooms were being redecorated at different times. It was a comfortable chaos though, as the family's books, board games, toys and other detritus of everyday life were scattered around, tidied up and moved from one place to another. The boys bedroom in particular was a site of carefully controlled chaos, with artefacts representing their very diverse interests lining the walls, shelves and other available surfaces – from their collections (model ships, owls), to their books, to relics collected on walks (badger skulls, feathers, bones), to their writing implements – pens and pencils everywhere, to their sports equipment and costumes for their amateur dramatics.

This was a very busy family, with Dad frequently away for days at a time on business, Mum working full time in a local school and the three children commuting by bus to their local schools, and staying with a child minder in the early evening. The two boys attended scouts, and the girl attended Brownies, and all were involved in the local Gang Show⁷²; both boys also played football regularly. Despite this, the family spent a significant amount of time together, either watching television, playing board games, going for walks, or playing on the computer. The most demanding member of the family was probably the dog, who required walking for up to two hours a day, a chore that usually fell to the two boys after school, giving them plenty of exercise and adventures with cows and other wildlife on their rambles, but also leaving them complaining of tired legs when they got home.

⁷² The Gang Show, and the failure of one of the leading actresses to appear on stage when the twins were performing together, because the designated Brownies hadn't told her she was on, led to my favourite, utterly irrelevant, quotation in the course of the project 'Give me a Brownie to strangle'.

In comparison with other families I interviewed, the G family had relatively little in the way of media technologies, they had only one television set, and the children had no media technologies – either TV or radio – in their bedrooms. The parents had mobile phones, but otherwise the family had no other mobile devices. They did, however, have a long history of computer use in the home although this was primarily for purposes of supporting the parents' work. Mr G, after his chemistry degree, had become interested in programming and moved into strategic consulting (the implementation of large scale technical systems in order to change business practices). He works with computers all day, and designs and delivers systems that span the globe. As such, he often brought his computer home for work purposes, starting with a laptop when the boys were about 1 year old, then bringing home second hand PCs from his various workplaces when they became obsolete. These home computers were used primarily by Mr G to finish off work at home, and by Mrs G for ongoing training and development, for example, completing her coursework assignments for the National Childbirth Trust. Mrs G had had very little interest in computers until her husband brought these home; however, when she came to use them for her work, and when she saw her children's interest in them, she quickly became an advocate for using them at home:

I was really negative for years about computers. And Jim started bringing laptops and PCs and things home from work now and again and playing games with the kids and so on and I got interested in that and I could see the value of that and doing things with the children, and it really wasn't until I'd learnt to type and I started using it for word-processing and finding it useful for work

Mr G, however, was more sceptical about his children using computers, not wanting them to become either addicted or bored by them. He intentionally did not buy a family computer for years, until the recent purchase of an 'all-singing, all dancing' multimedia PC on the urging of his wife, as she says

We got the PC the same time we got the dog [laughs] that was an expensive month'

Before this purchase, Mr G consciously limited the children's use of the computer to Sunday afternoons and at the time of my visits, when the children were 10 and 6, he encouraged them to play games rather than be 'taught' by him the 'proper' use of the computer. As he saw it, playing games was a process of familiarisation that would help them understand most of the necessary parts of the computer anyway. Despite this, however, the parents do not buy games for their children, they have to buy these themselves or be given them by relatives. He also set up the Internet and the computer system for the family, creating personal 'log in' screens for each member of the family, and passwords for the Internet. Mr G acts as the technician for the family, solving all problems, supplying printer cartridges, acting as a helpdesk during the day at work for any phone calls from his wife and children.

The computer plays an important role in each family member's activities now – Mr G uses it for games and relaxation and to record music (he played the mandolin and bazouki), Mrs G uses it to prepare posters, leaflets and invitations for 'one of the various committees I'm always on', they go on the Internet together to book holidays, and as a family to look up football results or special interests. The two boys use the computer for games, particularly Star Wars, Football Manager and

Civilisation, often playing these together and shouting advice and instructions to each other; even, occasionally, playing with their little sister. The boys also use the computer to look up information for school, using CD-ROMs, and to write stories either for school or for pleasure. Their little sister will play games with the boys and her parents, but particularly plays the edutainment software and enjoys making invitations and cards with her Mum. The whole family has become involved in playing Civilisation, with Dad particularly 'addicted', and the boys competing with him to see who can be most successful. 'Even' Mrs G and her mother had been known to spend an evening playing Civilisation and an often repeated family story has Mum and Grandmother upstairs on the computer forgetting to cook the children's dinner.

The two boys, however, did not particularly see the computer as a central element of their lives; football and spending time with the dog were clearly more important to them. They were very creative children, writing stories both on and off the PC, and spending a lot of time starting new projects and beginning new adventures with the dog; to some extent, these children lived a strange mixture of an Enid Blyton fifties childhood in combination with the capacity to control Star Wars X-Wing Tie-fighters of an evening.

We went along there and went down the lane, and we met so many distractions. There's a dog called Bruno down there, cows, more dogs, horse and that's it. And there was another time we went down the lane one morning and I knew it was going to be a bad day the moment we went down there because he was dragging us all over the place, he was really pulling and then there was this black cat runs across the road and like the dog ran off and like I'm holding on to him, I'm running behind him and like we broke the land speed record. The cat got to the fence, he went under the fence. The dog jumped over the wall and went into someone's garden. Luckily he'd managed to pull the lead off me by this time and we had to leap over the wall and go into someone else's garden [...]

You're inside the cockpit, you're flying it. That's one. That's what you're flying. That's what the view from inside the cockpit's like. You've got like the ship there you're attacking and then you've got.... Like that is brilliant.

The boys, and the family, tend to attempt to balance computer use with a wide range of other activities, indeed, the boys look at their father's experience and working life, and specifically identify their own desire to not live a life through computer technologies:

I've noticed that Dad, he works with computers and I've noticed that people who sit and work on computers and that all day, you know, don't get much to do, you know, walk around much. They like to go out and take walks and that, like my Dad does. And with me, I'm a mixture of both, because I mean I get to run around and lot and I get to just sit down and do hard maths. So I like going on the computer, but I also like to go outside and do activities and walk the dog.

There were few family arguments around access to the computer; the main rule being to ask before using it as it was viewed as a shared resource for the parents' work, the children's education, and everyone's leisure. The computer is at the top

of the stairs, between all three bedrooms and the bathroom, with one chair and no other resources surrounding it. It is in direct view of the front door when you enter the house and is about as central spatially to the house as it would be possible to get. Arguably, of all the six families I have discussed, the G family represent the most complete integration of the computer into all family members' lives, and the most fluid and regular interactions around the computer between all members of the family. Interestingly, it was in this family that there was most scepticism about the drive to ensure children gained ICT skills through formal educational experiences.

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